Productivity, Comparative Advantage, and Competitiveness in Africa

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Abstract

This paper draws on the author's extensive experience in conducting comparative advantage and competitiveness analyses, particularly in labor-intensive manufacturing industries such as textiles and clothing. Combining insights from economic and business analysis literatures, the paper reviews research done on competitiveness foreign direct investment in sub-Saharan Africa. The survey highlights the limitations of analyses based solely on cost comparisons, and argues for a hybrid, micro approach to understanding export-oriented, manufacturing industry development which takes into account socio-cultural constraints to business development, workforce development challenges, entrepreneurship, industry benchmarks, and global business competitiveness trends in addition to costs and policy variables in assessing how Africa's industrial base can move forward and help to restart growth in Africa.

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Prologue

There once was a business man from Africa who went to New York to seek his fortune. He came from a commercial family which understood how to take advantage of business opportunities at home. Spatial isolation, poor infrastructure, and policy interventions galore had made it easy for his family to engage in plentiful money-making activities, taking advantage of the rent-seeking and spatial arbitrage opportunities that these conditions created.

The son had bigger dreams and went abroad, not to Europe but to the "new world," not to trade but to grow a business. He invested his money and energies in creating a clothing company in the United States. He imported textiles from Africa and the Far East and produced high value Afrocentric fashions in New York for quality-conscious African-American and multicultural consumers. Building on the couture culture he had grown up with, he developed a diverse range of designs adapted to American tastes. He mastered merchandising and retailed his garments across the United States through a variety of retail and mail-order distribution channels, including his own catalogue company. He was successful and his company grew.

His business success did not go unnoticed back home. One day, the president of his country convinced him that he should return home. His country needed his expertise, experience, and the jobs he could offer, said the president. So this successful apparel entrepreneur brought his business back to Africa. He reckoned that although workers were not as productive as in New York's garment district, they did not cost as much either. He knew that trade institutions were cumbersome and infrastructure unreliable, but was told that locating in the country's export processing zone would give him favorable access to the imported inputs and physical infrastructure he needed. He understood that successful marketing required unfettered access to phone/fax/email lines and overnight shippers, and hoped that the telecomm and transport privatizations he had heard about would mean he could function almost as easily from Africa as from New York.

Two years later, his apparel business had been significantly scaled back. Because of input delivery constraints, his product selection had to be scaled back. Labor issues were particularly acute with respect to the limited availability of management skills. Customs officials thwarted his access to overseas suppliers, imposing cumbersome procedures to avoid the high duties charged on textile imports into the rest of the economy. Access to foreign exchange was difficult, and banking transfers to overseas suppliers and from overseas customers took months to complete.

Telecommunications breakdowns were not uncommon, and costs were exorbitant. Removed from his final market, he was less able to predict future U.S. sales and thus delayed his input orders from Asia until he had orders in hand. This lead time (a minimum of two weeks), when added to several days of customs delays and from several days to a week or two of manufacturing down time due to utilities outages, made him less able to service demanding U.S. customers. Away from New York, he also could not access the marketing assistance he needed to pull new customers in, nor did he invest in the market outreach to better connect himself to new distributors.

Two years later, his apparel company had developed a thriving new business unit: a local ice making company, which delivers frozen blocks on push-carts to businesses and households throughout the capital.

This is a true story about one man's experience in trying to grow a labor-intensive, export-oriented, manufacturing enterprise in Africa. The entrepreneur had the skills, the experience, the wealth, and the connections to bring this thriving business back from the U.S. to home soil ... and has nearly given up his original mission in the face of a thriving new market opportunity at home.

Back in Africa, it is far easier to be successful in the old way, once again taking advantage of easy market opportunities created by spatial isolation, poor infrastructure, and policy interventions, than it is to fight uphill against the myriad of constraints – economic and otherwise – that create barriers to business creation and expansion in Africa today.

I. Introduction

The story about the thwarted African apparel manufacturer is disturbing. It suggests that even when skilled human and financial capital resources are available to launch productive activities in Africa, the local business climate may make export-oriented manufacturing too inefficient and too costly to be internationally competitive. Institutional constraints (e.g., inefficient customs regimes, irregular or inadequate infrastructure, unreliable enforcement of business regulations) can conspire to discourage such entrepreneurship even in the face of proven experience in the business. At the same time, these same persistent barriers to business and trade may continue to offer more interesting and more lucrative opportunities for non-tradable service industries such as petty commerce and local trade.

Recent reports suggest that Africa continues to fall behind in terms of attracting foreign direct investment (FDI) from the U.S. (USITC 2000) and elsewhere (UNCTAD 1999, World Bank 2001). Total two-way trade between the United States and the region is declining, U.S. exports to Africa have decreased in every major sector, the U.S. trade deficit with sub-Saharan Africa (SSA) increased, and while sub-Saharan Africa received an increase of 27.3 percent in foreign direct investment flows in 1999 from global sources (most of which was invested in Angola, Nigeria, and South Africa), U.S. direct investment flows to the region declined by nearly 59 percent.

All is not bleak. Per capita incomes in Africa have risen recently (1998-99) for twenty-four out of thirty-three countries, benefiting an estimated 442 out of 642 million people, by an average 2.3 percent (World Bank 2000).² Yet with resurgent economic growth come new burdens. One country depicting such burdens is Mali. Mali's agricultural production and exports (especially those of cotton, rice, and livestock) are booming, owing to a combination of a 50 percent

¹ I am grateful to Ndaya Beltchika-St. Juste, senior investigator of the Equity and Growth through Economic Research/Public Strategies for Growth with Equity project's "Barriers to Business Expansion" study (Beltchika et al. 1999), for this anecdote.

² Per capita GNP fell for the other nine countries by an average –6.1 percent. The Democratic Republic of Congo and countries with a population of less than 1 million are excluded from consideration.

devaluation of its currency, the CFA franc, in 1994 and several years of decent rainfall. Cotton fiber production has more than doubled in the last ten years, leading to increased demands for energy in the ginning sector, improved transportation corridors to coastal ports, and investments in downstream value-added processing (Salinger et al. 1999). Mali's comparative advantage in supplying rice for regional consumption is becoming clear, with higher productivity following development of improved varieties, rehabilitation of infrastructure, liberalization of marketing and input supply, and liberalization of its rice milling sector (Barry et al. 1998). Produced in two seasons during the cropping calendar under irrigated conditions, expanding rice production increases the demand for water. Rebounds in live animal production in Mali have not only increased live animal exports to coastal markets in the region, but also renewed interest in new value-added processing of slaughter by-products, which would require investments in infrastructure, training, and quality control systems (Metzel et al. 1997). Foreign investment also flooded into the mining sector (especially for gold extraction) in the early 1990s.

As a consequence of all this renewed economic activity, Mali's GDP growth (both agriculture and industry value-added) has exceeded that of sub-Saharan Africa overall since the devaluation. Per capita GNP in Mali grew at a healthy 2.7% rate in 1998-99, compared with a negative 0.3% rate for sub-Saharan Africa overall.³ The implications of such trends are widespread. New assets are being converted into real estate, with a consequent building boom being witnessed in Bamako. With agro-processing activities taking off, the demand for infrastructure (transport, energy, telecommunications, water and sewer) is soaring. During the dry season when rivers are low, hydroelectric-based power shortages are frequent, yet the replacement generator-based power to which commercial (and some private) consumers turn is expensive. National and regional solutions are presently being debated in Mali to these "problems of growth."

At the same time, global prospects for improved comparative advantage of traditional African agricultural and mineral exports appear promising (Hertel, Masters, Elbehri 1998). However, restarting growth in Africa must involve not only a resurgence in agricultural comparative advantage to stimulate growth in the rural sector where most of Africa's poor reside, but also a shift toward labor-intensive, export-oriented manufacturing to stimulate growth in the non-rural sector as labor migrates toward urban centers. Moreover, investment in value-added processing of raw materials in the production of which Africa has demonstrated comparative advantage would allow African exporters to exert greater control over a larger portion of the value-chain and thus offer higher returns and increased protection against terms of trade fluctuations. Thus, this paper focuses on understanding the issues of productivity, comparative advantage, and

³ Other African countries with positive per capita GNP growth in excess of 1% include Benin (2.2%), Botswana (3.0%), Burkina Faso (2.7%), Cameroon (2.2%), Central African Republic (1.9%), Congo Republic (4.8%), Côte d'Ivoire (1.1%), Ethiopia (4.8%), Ghana (2.1%), Madagascar (2.3%), Malawi (4.4%), Mauritania (2.0%), Mozambique (6.6%), Rwanda (4.8%), Senegal (2.3%), Tanzania (3.1%), and Uganda (4.8%). World Bank 2000.

⁴ The poverty reduction and economic growth literature is vast and rapidly expanding. For a comprehensive review comparing the broad-based sustainable development approach to poverty reduction which balances the need for economic growth with the need to invest in human development and social safety nets with the new poverty reduction paradigm of many international organizations which stresses *inter alia* human development investments, direct interventions targeted to poor and vulnerable populations, and empowerment of the poor, see Salinger and Stryker (2001).

competitiveness affecting Africa's processing and manufacturing firms and does not consider the same for the agricultural sector.

Key questions addressed in this paper include:

- How are changing global patterns of manufacturing and trade affecting the competitiveness of African manufacturing?
- How have changing global patterns of manufacturing and trade affected our conceptual framework for measuring the competitiveness of manufacturing? What do we know about the socio-culture of Africa's business environment which affects African manufacturing?
- What is the relative importance of cost versus non-cost factors in determining the competitiveness of African manufacturing?
- What is the appropriate analytic mix between cross-industry studies and competitiveness analyses grounded in industry-specific knowledge?

This survey paper offers a business analysis perspective on competitiveness challenges facing African firms seeking to restart growth in Africa. New opportunities available to Africa for trade and investment in global markets are outlined in Section II. The conceptual framework for thinking about productivity, comparative advantage, and competitiveness is presented in Section III. Section IV reviews recent research insights, particularly those gleaned by EAGER researchers working in Uganda, Kenya, Mali, Côte d'Ivoire, and South Africa across a variety of sectors. Determinants of foreign direct investment in Africa are explored in Section V. Emerging conclusions are summarized in Section VI and Section VII outlines an agenda for future research to connect micro, meso, sectoral, and macroeconomic analysis which will yield better data and sharper insights into the processes of enhancing productivity, comparative advantage, competitiveness, and thus economic growth in Africa.

II. Trends in International Trade and Investment⁵

International trade and investment practices have evolved widely in the last twenty years. This corresponds roughly to the "lost era" for African economies when aggregate African economic growth slowed drastically or even reversed, never keeping pace with the rate of population growth.

While Africa's economic policy makers were busy supporting import-substitution, protecting domestic producers from international competition, propping up state enterprises, and defending overvalued currencies, Africa's terms of trade fell, the condition of its physical and human infrastructure deteriorated, foreign direct investment (FDI) dwindled, exports waned, and debt vis-à-vis public and private domestic and foreign creditor institutions mounted.

Meanwhile, other parts of the world invested in primary education and new infrastructure, maintained high domestic rates of savings (and thus borrowed little), developed sophisticated

⁵ This section is drawn from Salinger (1997).

institutional arrangements to facilitate trade (such as modern banking, customs, and freight regimes), and either offered attractive policy environments to potential foreign investors via physical or virtual export enclaves or liberalized-cum-devaluation their economies and currencies to the benefit of domestic and foreign entrepreneurs alike. While the lines of causality between domestic and international growth and domestic and foreign investment are still being debated in the literature, it is clear that FDI flows to non-African developing countries have skyrocketed (Jasperson et al. 1995).

The result is that today's international trade and investment scene outside of Africa is alive with sophisticated consumers in industrial countries wanting products which they hire the rest of the world to make for them. A clothing design and merchandising company in the U.S., for example, may design a line of mix and match apparel using a consistent fabric and color board across all items in the line, each of which is subcontracted for manufacture in a different country. Despite the image of one coordinated set of garments, the consumer reads labels indicating Honduran, Philippine, Turkish, and Mauritian origins. The U.S. designer/merchandiser in this case has actively sought out manufacturing partners in clothing exporting countries who can deliver quality garments, in the required run size, at a specified delivery date, and at a good price. Service counts, and the exporter must be able to access imported fabric and trim inputs efficiently, communicate reliably with the client, accommodate last-minute changes in style and order parameters from the client, and guarantee shipping or air-freighting with compliant customs forms filled out so that the shipment does not get hung up at the port. Today, a new supplier (meaning both new country and new firm) must have a modern image as an efficient manufacturer/exporter, be able to deliver on that image, and be at least 15-20 percent cheaper than the traditional supplier, in order to break into that same market and convince the client to take the risk in diversifying supply.

Yet despite the burgeoning trade in non-traditional manufactures, few Africa exporters have diversified beyond the same tried and true commodities (mostly agricultural or mineral resources, with little value-added provided locally) which they sell to traditional partners in Europe. Even when "non-traditional" products, such as green beans or cut flowers, find export niches in Europe, spillovers into other high-value products seem stymied.

The challenge, therefore, for Africa, is not just how to end its marginalization, but how to learn to assert itself as an innovative commercial contender on the global trade scene. Africa's business men and women need to learn how to get involved in developing new products, new markets, new ways of doing business, and attracting new sources of foreign direct investment.

With regard to new products, the biggest surge in international trade today comes from non-traditional exports, as opposed to bulk commodities. In agriculture, this means a wide range of fresh and processed specialty products to cater to affluent consumer tastes. In manufacturing, office and telecommunications equipment and automotive products represent two of the most dynamic trade categories, exceeding the value of trade in agricultural or mining products. If Africa is to take advantage of new product trends, it must learn to produce what foreign

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⁶ World Trade Organization, "Growth rate of world trade doubles in 2000," *FOCUS*, no. 50 (December 2000).

consumers want to buy. To some extent, this involves developing intelligence gathering networks which allow African business men and women to gauge trends in consumer tastes, quality standards, and market organizational changes, and rapidly adjust production processes to respond to these trends. However, African exporters need not despair of not knowing foreign markets in detail. In many instances, plugging into new product markets is a question of becoming an attractive export production platform to attract foreign investor or subcontractor interests, who then bring with them the product specifications already designed with the foreign consumer in mind.

In relative terms, exports of primary commodities (food, beverages, fats and oils, and agricultural raw materials) represented a declining share of total world exports in 1991 compared with 1970 (from 20 to 12 percent). In contrast, exports of machinery and transport equipment, textiles/clothing, and other manufactures represented an increasing share of total world exports in 1991 compared with 1970 (from 62 to 71 percent). Yet for SSA countries, primary commodity exports still represent nearly two-thirds of their total value of exports (Barry and Beltchika 1996).

"New products" also includes services. While world merchandise exports in 1999 totaled \$5,470 billion, world exports of commercial services in 1999 amount to \$1,350 billion, or 25 percent of merchandise export value. New categories are also emerging in the services sector. For example, exports of "other private services," such as insurance, banking, and telecommunications, outperformed exports of traditional services, such as tourism and transportation services.

With respect to new markets, world trade is actually becoming more developed country focused as rich countries trade increasingly with each other. Yet among non-oil exporting developing countries *outside of Africa*, the percentage of trade with other developing countries is increasing. While 70 percent of Africa's food exports went to developed countries (EEC, North America, Japan, and others) in 1960, in 1990 77 percent of Africa's food exports were sent to the same (Barry and Beltchika 1996). Following devaluation of the CFA franc in 1994, many West African entrepreneurs have found that their products are potentially competitive in neighboring economies, relative to extra-regional imports, as well as in international markets.

Greater diversification of export destinations is difficult for African exporters to achieve, however, in the face of preferential trade agreements favoring traditional relationships and cascading tariff protection in industrial economies which penalize against the export of increased value-added products from Africa and elsewhere. Breaking into the U.S. market for mangoes or apparel is difficult for African exporters, for example, with Mexican and Caribbean suppliers waiting next door. Increasing exports of higher value-added products into industrial country markets is stymied when the U.S. and EU import tariffs sharply increase with the level of product value-added (Binswanger and Lutz 1999).

As global trade volumes increase and both the variety of products and services and the network of trading partners diversify, firms are obliged to adopt new ways of doing business to maintain their toehold in the international marketplace. These include new relations between exporter and

⁷ World Trade Organization, "Growth rate of world trade doubles in 2000," FOCUS, no. 50 (December 2000).

importer, sophisticated product differentiation, improved efficiency of service delivery, and cost reduction.

Trade is booming because the organization of manufacturing enterprises is changing, resulting in increased off-shore manufacturing of products destined for intermediate or final consumption in another country. The telecommunications revolution now allows for product designs and manufacturing specifications to be determined near the final consumer and then communicated electronically to manufacturing sites around the world. The telecommunications revolution has also changed the way African enterprises can access international expertise, capital, and inputs. Websites, business-to-business linkages, and email listservs are just some of the electronic innovations making a difference.

Products traded today are not just commodities whose competitiveness is based on low production and assembly wage costs alone. Frequently, they are sophisticated manufactures, the production and marketing of which are both skill and labor intensive in nature. For example, while the manufacture of some of these products still requires assembly line labor, increasingly international value-added today is created by skilled design, production sourcing, logistics, and marketing professionals. Abernathy et al. (2000) note that among the most successful U.S. apparel firms, labor costs are an insignificant share of total garment cost. Of course, this is partly because the labor-intensive portion has in many instances been subcontracted out to lower wage platforms overseas. But it is also because the costs of design, merchandising, logistics, and retailing are far more important in today's world of non-commodity manufacture. Demand for apparel by wealthy consumers is not subsistence demand. Rather, demand is for a variety of items as a function of season, style, color, mood, etc., i.e. a demand which can be shaped by services downstream of the actual manufacturing process.

If African businesses are to compete in this world, its workers need advanced skills via higher education. One of the binding human resource constraints cited by clothing enterprise managers in South Africa, for example, is not the lack of basic skills among workers, but rather the lack of worker and management self-confidence and initiative, the absence of which prevents the unleashing of new productive energies. This is not something taught in remedial adult vocational classes, but something far less tangible that emerges over time in countries where a well-trained labor force is unconstrained by excess rigidity and regulation, and can explore new modes of doing business.

Finally, in addition to new products, markets, and ways of doing business, new patterns of foreign investment are emerging. This is the corollary to trade flows. If diversification of geographical trade patterns is to occur, so too diversification of investment sources must change. Whereas colonial ties have largely defined Africa's "logical" sources of investment capital, for obvious historical reasons, investors in other parts of the world are taking an interest in Africa. Closest to home is South Africa, whose mining and consumer product tycoons are now setting up enterprises in resource extraction and production for domestic consumers in a number of countries across SSA. Mauritians are also investing in Madagascar for alternative manufacturing platforms. Another growing source of capital and manufacturing/export know-how to SSA is

Asia. African leaders are increasingly leading trade and investment promotion tours to Indonesia, Malaysia, India, Taiwan, and Korea, to solicit interest of Asian investors in their countries.

One industry example of shifting FDI sourcing patterns which has taken place over the last ten or fifteen years is in the international textile and clothing sectors. Diversification of production platforms has occurred in part because of changes in comparative advantage (relative cost of factors) over time (Park and Anderson 1991), but also because international manufacturing capital sought new country production platforms when the MFA quota from a particular exporting country was exploited (Hamilton 1990). This phenomenon brought Korean investors to Bangladesh and Hong Kong investors to Mauritius. Taiwanese investors were lured to South Africa by South African Government incentives in the 1980s in order to develop a manufacturing sector demand for labor in "decentralized areas," i.e. homelands. Shifting FDI patterns are also driven by structural changes in the competitiveness of subsectors. In apparel, for example, the innovation of "lean retailing," whereby increasingly concentrated numbers of retailers require manufacturers to manage inventories and re-supply so as to minimize retailers' inventory costs, is leading manufacturers to an increasingly regional supply strategy. Mexico and the Caribbean have become the preferred supply networks for North America, while Western Europe increasingly turns to Eastern Europe and North Africa for quick-response suppliers.

III. Conceptual Framework

Productivity, comparative advantage, and competitiveness are three key concepts which structure our understanding of what makes economies, and the microeconomic actors of which they are comprised, grow.

As patterns of world trade have evolved over the last twenty or thirty years to involve increasingly heterogeneous products and services, our conceptual frameworks have had to evolve. Previously, when the bulk of goods traded consisted of non-distinguished commodities, cost was a key deciding factor in determining sourcing patterns. Thus, the comparative advantage concept of measuring economic costs of production made the most sense for comparing among alternative sources of production. However, as the kinds of goods and services traded internationally have become increasingly complex, our conceptual framework has evolved to embrace the more complex idea of "competitiveness" as the key notion for comparing among alternative suppliers.

However, the term "competitiveness" is used in different ways by different researchers. It is sometimes used interchangeably with the term comparative advantage, referring to the economic cost of production of a good, or it may be used in an even narrower sense to evaluate the financial performance of firms (Cockburn et al. 1996). It may be used interchangeably with technical efficiency or productivity (Biggs and Raturi 1997). Some researchers have used it to measure the broad economic performance of countries (World Economic Forum *various*), localities (Kanter 1995), or industries and firms within countries (Wangwe 1995). In the management and business literature, the term competitiveness refers to the ability of firms to master a range of qualitative management concepts within the industry or broader cluster in which they operate or at the national level (Porter 1990; Fairbanks and Lindsay 1997). Because this paper is concerned with African exporters' abilities to become involved in evolving patterns of world trade and

investment, it uses the notion of competitiveness as described by Porter and Fairbanks and Lindsay and compares it to the notions of productivity and comparative advantage more typically examined by economists.

A. Productivity

Growth models attribute increased economic growth either to accumulation of physical or human capital or to increased efficiency of their use (total factor productivity). Whereas neoclassical growth models view technical progress as exogenously determined, endogenous growth models consider a range of structural and policy variables which contribute to differences in technology endowment, investment, and knowledge accumulation among countries. The East Asia growth debate on whether economic growth was due to factor accumulation (Young 1994a and 1994b; Krugman 1994) or increased total factor productivity (summarized in Collins and Bosworth 1996) may have important insights for Africa's strategies for restarting growth.

Table 1 decomposes growth in output per worker in developing regions of the world, whereby output per worker equals contributions due to increased factor use (capital and education per worker) plus increased efficiency (total factor productivity). The table compares Africa's experience with East and South Asian experiences in two time periods, before (1960-73) and after the oil shock (1973-94). In the earlier period, the percentage contribution of capital per worker in Africa to output per worker (1.3/1.9=0.68) exceeded that in East Asia (2.3/4.2=0.55), but total factor productivity per worker in Africa lagged behind East Asia's. By the post-oil shock period, Africa's capital per worker contribution lagged that of East Asia, and the growth in TFP per worker in Africa was actually negative, resulting in negative output per worker. A similar story is repeated in the Middle East over the two time periods. The contribution of Africa's workforce, measured below in terms of education per worker, is also the lowest among regions for both time periods. Understanding factors underlying these trends is the objective of the research surveyed in Section IV.

⁸ The economics literature on productivity and its relation to growth is covered in detail in McPherson (2001).

⁹ For a full discussion of the methodology for estimating changes in physical and human capital stocks, see Collins and Bosworth (1996).

Table 1: Comparing Sources of Growth

(annual percentage rate)

	Output per worker	Capital per worker	Education per worker	Total factor productivity
1960-73				
Africa	1.9	1.3	0.2	0.3
Middle East	4.7	2.0	0.4	2.3
Latin America	3.4	1.3	0.3	1.8
East Asia*	4.2	2.3	0.5	1.3
South Asia	1.8	1.4	0.3	0.1
1973-1994				
Africa	-0.6	0.4	0.2	-1.3
Middle East	-0.3	1.1	0.5	-1.9
Latin America	0.3	0.6	0.4	-0.8
East Asia*	4.2	2.5	0.6	1.0
South Asia	2.6	0.9	0.3	1.3

Source: Collins and Bosworth 1996

Note: * Excludes China

Collier and Gunning (1999) review the growth literature related to Africa and highlight a number of possible explanations for why African countries grow more slowly than others. These include a lack of "social capital" (by which is meant the web of institutions and associations which connect households and firms and promote growth), lack of openness to trade, geography and risk factors, deficient public services (civil service, education, infrastructure), lack of financial depth, and high dependency on aid transfers. Nevertheless, even after accounting for these factors, the African dummy variable on certain slopes and the intercept remains significant, indicating that other factors must also be at work.

Stryker and Pandolfi (1999) explore the relationship between structural and economic variables and TFP. They find, by and large, that the same variables which influence economic growth in endogenous growth equations also affect TFP. Larger, more open countries with sound macroeconomies experience faster rates of TFP growth, which is true even after controlling for FDI flows ¹⁰

B. Comparative advantage

Productivity is one term in the equation defining comparative advantage, an economic cost concept. Economic costs are financial costs paid by producers, from which all economic distortions (e.g., taxes, subsidies, market interventions, exchange controls, trade restrictions, etc.) are netted out. Total economic costs per hectare or firm are divided by output per hectare or firm

¹⁰ Stryker and Pandolfi conclude that the main role played by FDI is through its effects on capital accumulation, rather than its enhancement of efficiency (TFP).

¹¹ Analysis of comparative advantage is derived from project appraisal analysis, first expounded in Little and Mirrlees (1974). Domestic resource cost coefficients (DRCs) are discussed in Bruno (1970), Pearson (1976), and Pearson, Stryker, and Humphreys (1981). For a compilation of Belassa's writings on the topic, see Belassa (1989). Practical guides to the estimation of DRCs are found in Pearson, Stryker, and Humphreys (1981), Tsakok (1990), and Sadoulet and de Janvry (1995).

(i.e. yield) in order to derive unit economic costs of production. This simple calculation reminds us that a producer need not be the lowest cost producer in order to have a comparative advantage – as long as his/her access to technologies, productive labor, and/or allocative efficiency across inputs permit a level of productivity such that the *unit* cost of production is attractive.

Comparative advantage, measured by comparing local economic costs of production with international reference prices, can be summarized neatly in one indicator, known as the Domestic Resource Cost (DRC) coefficient. The DRC is estimated as the ratio of the economic value of "domestic resources" (i.e., factors of production) used in production relative to the economic value-added (economic value of output minus the economic value of tradable inputs) generated by the production process. The domestic resource costs earned or saved by producing product j are defined as:

$$DRC_{j} = \frac{(f_{s,j} * P_{s}^{*})}{P_{j}^{*} - (a_{i,j} * P_{i}^{*})}$$

where: $f_{s,j}$: quantity of factor of production s used to produce one unit of product j

P^{*}_s : international reference price of factor of production s

P^{*}_i: international reference price of product j

a_{i,i} : quantity of tradable input i used to produce one unit of product j

P_i : international reference price of input i

The DRC thus represents the value of domestic resources (expressed in reference prices) spent in order to gain or save a unit of foreign exchange. In order to see whether a country has a comparative advantage in the production of product j, the DRC should be compared to the exchange rate which reflects the scarcity value of the foreign exchange for the entire economy, that is the reference exchange rate.

A DRC coefficient which is greater than 1.00 suggests that the firm is using more value in domestic resources than it is gaining in tradable value-added, i.e. is not making efficient use of those domestic resources. A DRC coefficient which is less than 1.00 suggests the opposite, i.e. the firm is gaining more in terms of tradable value-added than it is using in domestic factors of production. In the latter case, the firm is said to demonstrate a comparative advantage, relative to other global producers, in the production of that good. In comparative advantage analyses, firms may be cost-competitive supplying the domestic market (or nearby regional market) on an import-substitution basis, at a higher unit cost of production, or they may be cost-competitive exporting to foreign markets at a lower unit cost. ¹²

Thus, both costs and productivity affect comparative advantage. All else being equal, companies which exhibit lower unit costs for the same product, delivered to its point of sale, will be more successful than firms with higher costs. All else being equal, the firm which is more productive

¹² For the former, the relevant international reference price would be the CIF price, adjusted to the local market, of the good, whereas in the latter case, the relevant reference price would be the FOB price of the same commodity.

(produces more widgets per a given set of inputs, or uses fewer inputs per a given number of widgets produced) will have lower unit costs than a firm with lower productivity.

However, all else is not equal.

Two countries may have the same unit economic cost of production of a particular exportable product, measured FOB at their borders. However, if country A sits on a convenient international shipping line and can ship a container of goods to the U.S. at a lower cost of shipping the same container from a point of departure in country B, then country A will get the nod to supply an importer's needs. This potentially penalizes land-locked African countries which must either transport goods overland to coastal seaports for export or airfreight goods to foreign customers. In many instances, overland routes are fraught with informal road barriers for collecting illegal taxes, while local airlines represent inefficient and expensive transport alternatives. Africa's coastal countries suffer, too, as they often do not attract regular, containerized sea freighters to their ports. Thus, while distance may no longer "matter" internationally (Cairncross 1997), lack of access to cost-effective transport hinders Africa's ability to participate in the global trading system.

Similarly, two countries may have differential access to a given consumer market. In such a case, comparing two potential suppliers on the basis of their economic costs of production plus transport may be irrelevant to the importer. If country X has negotiated a preferential access agreement in a key consumer market, and country Y has not, commercial partners in the consumer market may find it less (financially) costly to do business with partner firms in country X. Such was the case for garment exports from Central America. When the North American Free Trade Agreement was implemented in 1994, it gave duty-free access to the U.S. market for Mexico's clothing exports. This diminished the relative benefits of the Caribbean Basin Initiative which had previously granted reduced tariff access for Caribbean nation clothing exports to the U.S. market. The inequity created by NAFTA, favoring exports from Mexico, was redressed with the passage of the Trade and Development Act of 2000. The granting of parity treatment of Caribbean exporters with Mexico by the new law has led some to conclude that the Africa Growth and Opportunity's offer of duty-free, quota-free access to the U.S. market for African garment exports will be overwhelmed by renewed commercial interest of U.S. producers in nearby nations. The producers in nearby nations.

The comparative advantage calculation begins to lose its effectiveness as an analytic tool as one considers increasingly complex goods. Porter argues that comparative advantage is based on several outdated notions: that there are no economies of scale, that technologies everywhere are identical, that products are undifferentiated, that the pool of national factors is fixed, and that skilled or high quality factors are not tradable. "A theory which assumes away a role for firm

¹³ For details of the Africa Growth and Opportunity Act (Title I) and the United States-Caribbean Basin Trade Partnership Act'' (Title II) included in the Trade and Development Act of 2000, see http://www.ustr.gov/regions/africa/growth.shtml.

¹⁴ "Rival Law Spells Tough Competition For Africa," Business Day (Johannesburg), February 16, 2001 as covered in http://www.allafrica.com/stories/200102160119.html .

strategy, such as improving technology or differentiating products, leaves firms with little recourse but to attempt to influence government policy." (Porter 1990, pp. 12-13)

As manufacturing diversifies into increasingly differentiated products which are sold to end consumers via sophisticated marketing campaigns, comparative advantage estimations at a minimum must be careful to compare comparable goods. For instance, the cost of production of basic commodity garments such as T-shirts, dungarees, and simple men's tailored shirts cannot be compared to the cost of production of higher valued garments such as tailored woolen suits or fashion wear, or even basic-fashion garments such as polo shirts, khaki pants, or fancier men's tailored shirts. These are separate product markets, requiring separate cost comparisons and distinct comparative advantage estimates. Furthermore, comparative advantage analysts have to be careful to include overhead expenditures (research and development, travel, advertising, customer relations, professional association networking) and attribute these to the cost of specific products.

C. Competitiveness

The conceptual leap from the economic cost-based notion of comparative advantage to the broader notion of competitiveness adds a wide range of more qualitative issues. It also introduces a new set of observation variables into the discussion, drawn from business analysis. The classic treatment of these issues is found in Porter (1990). These are outlined in Box 1.

According to Porter, a host of commercial and management factors will affect a firm's ability to compete in the international marketplace. These include:

- factor conditions,
- the *structure* of market demand,
- interaction with related and supporting industries in the cluster¹⁵,
- the determinants of firm strategy, structure, and rivalry,
- the role of government, and
- a certain element of "chance."

These elements are visualized by Porter in a "competitiveness diamond," with different sides of the diamond emphasized to differing degrees as found in infinite combinations around the globe. This paper will distill what we know about enterprises in Africa, their strategic practices, and investment, relative to Porter's conceptual framework.

¹⁵ A "cluster" is similar to the economist's notion of a subsector, including not only firms of a particular industry but all of the surrounding firms which supply it with raw materials or processed inputs, help to distribute it to consumers, perform the research and development for it, etc.

Box 1: Determinants of National Competitive Advantage

Determinants	s of National Competitive Advantage General Conditions re Porter	
Determinants	Ceneral Conditions It I vite	
Factor Conditions	• Factor endowment (human resources, physical resources, knowledge resources, capital resources, infrastructure) must be low-cost or uniquely high-quality	
	• Factors must be effectively deployed (allocative efficiency, technology)	
	• Focus on advanced factors (IT infrastructure, highly skilled workers, sophisticated	
	research institutes) over basic factors	
	Focus on specialized over generalized factors	
	• Respect for dynamic renewal of factor qualities	
	Whether factors are created (invented, innovated) or simply inherited	
Demand Conditions	• Composition of home demand (what sectors, how sophisticated are buyers, how well	
	do home buyers anticipate global trends)	
	• Size and pattern of growth of home demand (economies of scale/learning, breadth of	
	market demand, rate of growth, how early is local demand, how rapidly is local market saturated)	
	• Mechanisms by which nation's domestic preferences transmitted to foreign markets	
	(are local buyers internationally mobile, what kinds of linkages to potential foreign	
	buyers)	
Related and	Competitive advantage cannot simply be in one industry alone, other related and	
Supporting Industries	supporting industries also need to be competitive, and the linkages among them need to work smoothly	
	Having home-based suppliers accords significant competitive advantage in terms of	
	the ability to coordinate, innovate, and upgrade versions using feedback loops	
	Having competitive firms in related industries in the home market can encourage	
	important synergies and actually lead to creation of new competitive industries	
Firm Strategy,	• Strategy and structure of domestic firms (management practices, relationships with	
Structure, and Rivalry	customers, attitudes toward authority, social norms, willingness of firms to compete	
	globally, attitudes toward travel and learning languages)	
	• Goals, motivations (company goals re profits/growth, individuals' goals)	
	• Domestic rivalry (competition environment,)	
	New business formation	
Role of Government	• Factor conditions affected by government through subsidies, capital market policies,	
	education policies, price controls/subsidies, public infrastructure investments, etc.	
	Local demand conditions shaped by government via the setting of local market	
	regulations or as a major buyer in the local market	
	• Related and supporting industries affected by government via regulations of business	
	environment, media and advertising, telecommunications market	
	• Firm strategy, structure, and rivalry affected by government via capital market	
	regulations, tax policies, anti-trust laws	
~-	Government also affects the overall "diamond" via macroeconomic policy	
Chance	• Random shocks can also have immediate repercussions for the business environment	
	• These may include acts of pure invention, major technological discontinuities,	
	discontinuities in input costs such as oil shocks, significant shifts in world financial	
	markets or interest rates, demand surges, political decisions by governments, and wars	
	or natural disasters	

Source: Porter (1990), pp. 72-130

The link between labor productivity and competitiveness is made by realizing that many of the management concepts found in the Porter competitiveness paradigm affect the human capital necessary for improving productivity. To the extent that one firm manages its materials inventory

and flow-through, the organization of its labor force, technology acquisition, and the supply chain out to final customers more efficiently than another, it will be able to increase its sales per unit labor and capital used compared to the other firm. This is increased total factor productivity, the lagging performance of which in Africa has already been noted.

In searching for further explanations of Africa's lagging TFP, this paper seeks clues in the microlevel competitiveness analyses undertaken in Africa in recent years. We believe another part of the answer lies in Africa's lack of attractiveness to foreign direct investment, the avenue by which many other developing countries have improved their global competitiveness. Thus we also take a special look at factors affecting foreign direct investment flows into Africa.

While the competitiveness of firms or industries may be easily *described*, it is less easily *measured*. Evaluations of productivity, comparative advantage, and competitiveness require detailed microeconomic research which examine cost structures, technical coefficients of production, levels of output relative to those inputs, and distortions in the economy which affect each of these. They also require examination of firm strategies for acquisition of inputs and raw materials, utilization of labor and capital, access to new technologies, development of new products, pursuit of markets, interaction among their partners and rivals, and interaction with the government sector.

Comparative advantage is measured by the DRC, described above. Interpretation of that DRC requires the analyst to be familiar with several of the same concepts that enter into a consideration of competitiveness. For example, the analysis would normally consider such things as the structure of factor and input markets, and how this affects a firm's access to technology, with what subsequent effect on factor productivity. If this varies widely across firms in the sample, then disaggregation of the sample into "traditional" and "modern" producers, or some other relevant classification, may make sense. The analysis should also consider how the firm determines what products it will produce and how it finds its markets for them. Disaggregation of cost figures between those firms which export to regional or global clients and those which produce strictly for the domestic market may be in order. Finally, a DRC analysis will certainly need to understand the economic policy environment which determines macro variables such as the exchange rate and the degree to which the market rate is under/overvalued relative to some equilibrium value for the currency. It will take into account such sector-specific variables as rates of trade protection (levels of duties, tariffs), the degree of subsidization/taxation of inputs such as water, fuel, and electricity, and policies which may have a price distorting effect on factor markets. DRC analyses typically have not considered issues focused on related and supporting industries or firm strategy, structure, and rivalry, which are less economic and more of a business strategy nature.

In the case of competitiveness, it is difficult to aggregate all these insights into one quantitative variable which measures a firm's performance on all these different levels. Instead, various studies have adopted the use of one or more proxies, some of which look at outcomes and others at inputs. On the outcome side, a typical proxy for competitiveness is the extent to which a firm (or nation) is increasing its market share. If the share is growing, then that firm (or collection of firms, at the national industry level) is said to be competitive. If the share is shrinking, then the opposite conclusion is drawn. Biggs and Raturi (1997) measure firms' value-added as a proxy for

competitiveness. Alternatively, Porter measures international competitiveness of industries by looking for a significant and sustained share of world exports to a wide array of nations and/or foreign direct investment by the home industry.¹⁶

A range of imperfect proxy measures of inputs into the competitiveness process can be tracked, including variables in a number of different areas.¹⁷ Countries or firms which exhibit greater labor or capital productivity (measured in terms of value-added per worker or per dollar of capital) are typically more competitive than countries or firms which do not (Coulibaly 2000; Biggs and Raturi 1997). Another productivity indicator may be a firm's investments in new capital equipment, information technologies, or investments in research and development as a percentage of total cost. The degree of computerization of product design, various parts of the manufacturing process, inventory control, and customer relations can be revealing (Salinger, Bhorat, Flaherty, and Keswell 1998).

Identifying where the firm sits in the value-chain also offers an important insight with respect to the degree of control a firm can exert in the design, manufacturing, marketing, and distribution process, and thus its competitiveness. This is particularly crucial for emerging exporters just entering globalized markets. In Vietnam, for example, most clothing firms in the late 1990s were still quite limited in their interactions with the international clothing value-chain (Salinger 1998). Nearly 80 percent of Vietnam's textile and garment export values are made on the basis of cut-make-trim orders, i.e. were contracted simply for assembly of imported components. Foreign brokers from Hong Kong, Taiwan, and elsewhere contract with Vietnamese firms for assembly, having already identified foreign markets, clients, and complete product specifications. Vietnamese firms understand that their competitiveness will be enhanced over time by assuming more complex market functions, but that in the short run they are still quite limited in their exposure to international markets. Many textile and garment exporting countries have experienced similar increases in international market power as the variables underlying their comparative advantage have evolved (Park and Anderson 1991).

In labor-intensive industries, the relationship between management and the firm's workforce is critical. Innovation is usually thought of as investment in capital equipment. Yet various studies reveal that an equally important part of the competitiveness equation includes the re-engineering of social relations of work, on-the-job workforce training, and labor participation in decisions regarding work organization (Flaherty 1985; Becker and Olsen 1987; Flaherty and Salinger 1998).

¹⁶ Porter specifically rejects domestic profitability as an indicator of competitiveness. He argues that government intervention can impede international competition and artificially support profits through protective trade taxes or domestic subsidies. Also, in an industry where many firms are following short-term "harvesting" strategies, firms may maintain profitability though they are losing competitiveness. Finally, lack of cross-country accounting standards makes cross-national comparisons of profitability problematic (Porter 1990, p. 797).

¹⁷ This list is the result of insights gathered from competitiveness analyses undertaken by the author in diverse country and industry situations including South Africa (textiles, clothing), Vietnam (clothing), Morocco (multi-industry), and Mali (textiles, clothing).

Another category of competitiveness indicators involves the extent of interaction of the firm with international sources of technical, product, and market information. While international firms in developed economies enjoy a variety of sources for such information via the business press, trade journals, professional associations and fairs, and the like, these are still quite novel for firms in more isolated developing countries. This may involve whether a firm is connected to a convenient, efficient Internet service provider, and whether it knows how to exploit that connection for market-relevant insights. It may involve subscriptions to international professional associations and trade newspapers. The degree of foreign equity participation in firm ownership or the degree of foreign management participation in firm operations may be a significant indicator of degree of connection to sources of international market information. Or it may be a question of monitoring the frequency of international travel by key managers in the firm to attend professional association meetings, trade fairs, training courses, pursue market development opportunities, and the like.

In this paper, the productivity of individual factors and the efficiency of their allocation within the firm, comparative advantage, and competitiveness are seen as inextricably linked. If a firm does not make productive use of its factors and other inputs, it is unlikely that it will master costs or generate value-added to such an extent that it will have comparative advantage in production. Without comparative advantage, a firm cannot be competitive in more qualitative areas. In other words, a firm is competitive when it is able, given the enabling environment surrounding the firm (the nexus of government policies and regulations affecting the doing of business in a country) and the management practices within the firm, to master costs, grow revenues, and expand market shares in an economically sustainable way over the long term. These issues are explored in the context of African country and firm experiences surveyed in section IV below.

D. Sociology of business culture

Is there something unique about "African" culture that helps to explain Africa's economic performance with respect to business, trade, and investment?¹⁸ The "firm strategy, structure, and rivalry" point on the Porter competitiveness diamond bears further exploration in the African context. How local economic actors respond to economic incentives is also fashioned by the sociology of the business culture in which they operate. With respect to business culture, Porter talks about the culture's values toward work and wealth, skill development, re-location/migration, and risk-taking, and patterns of manager-worker relationships, as possible contributors or detractors to cluster success.

"Culture" may be an uncomfortable concept for many economists. However, some interesting writings have emerged on the links between culture and economy, on the impact of culture on long-run economic performance, and on the effects of global integration on local culture. These three works suggest that the effect of globalization is felt differentially in various parts of the

¹⁸ It is recognized that treating all of sub-Saharan Africa as if it shared one "mega-culture" verges on the absurd. Across the continent, different ethnic backgrounds, different climatic and geographical endowments, and different colonial histories with respect to both politics and religion, have yielded different regional, national, and subnational cultures. Yet whether speaking of "East Asian miracles" (World Bank 1993) or "socio-cultural fitness" (Wilhelms 1998), regional dummy variables are often either implicitly or explicitly incorporated into our searches for explanations.

world, subject to the confluence of resource endowments, values, and political and social institutions active in each region. Their insights may help us to further refine the research agenda proposed here for Africa.

Several authors explore the linkages between geography and factor endowments. Boserup's (1965) contribution to the literature of economic development was the observation that changing factor endowments lead to changes in technology invention and adoption across societies. In his history of Eastern and Western cultures, Lal (1998) goes one step further. He explores how differences in factor endowments affect both the belief systems of societies and their ensuing political and economic organizations. Lal believes that the West's decentralized feudal societies of medieval Europe, combined with the ascendancy of individualism established by the Reformation, created the conditions sympathetic to individual, not communal, resource management and entrepreneurship, and ultimately led to the intensive, technology-based growth responsible for the wealth gap we see today between the West and other societies. What relevance does this logic have for our understanding of forces shaping the resurgence of economic growth in Africa?¹⁹ Lal's arguments suggest we need to do a better job of understanding how resource endowments have shaped the social institutions which govern resource management. To what extent are collective versus individual accumulations and management of wealth supported by the local culture? To what extent are there cultural values which mitigate in favor of or against investment for future individual versus collective gain? How is the propensity to entrepreneurship (as opposed to the aggregation of wealth through arbitrage activities such as trading) affected by the risks of Africa's ecology and polity?

Various regions of the world have obviously had different experiences as they come into greater contact with global markets. In the context of the remarkable expansion of capitalism in East and Southeast Asia, Brook and Luong (1999) ask whether these societies have adopted the same production/consumption system known in the West or whether cultural adaptations specific to Asia have been made along the way. By and large, the authors find that economic and cultural change in Asia takes place dialectically. Whereas the invocation of Confucian values was critical in first establishing unique local variations on capitalist structures, the forces of globalization are now reshaping interpretations of traditional cultural values. In most of the Asian case studies, the central role of the state in defining these new constructs is underscored. Whether a universal international stamp of capitalism will yet one day be crafted, or whether local idiosyncrasies will continue to make their mark on economic behavior, is of course unknown. Are there particularly African examples of adaptation or innovation best practices that shape African firms and their entry into global markets?

Interaction with the global economy can introduce profound changes in the existing socio-cultural organization and ensuing production and trade patterns. In Panama, for example, increased regional trade for food led to a decline in local subsistence agriculture, which in turn encouraged

¹⁹ "...despite the emergence of a number of African empires with their own distinctive civilizations over the centuries, African economies were never able to generate a sufficient agricultural surplus to allow the social and economic differentiation that has been a hallmark of the Eurasian civilizations. This was largely due to the fragility of the region's soils, which did not permit the adoption of the plow over the hoe and thence the transformation of shifting to settled agriculture." (Lal 1998, p. 27)

urban migration by rural men seeking employment (Tice 1995). With their wives left behind as *de facto* single heads of households, commercialization of handicraft production and increased roles for women as investors and exporters ensued. With increased income-earning opportunities, women have begun to organize cooperatives to market their products to merchants in Panama City and abroad. The increase in status allows these women to retain their rights to this export income, invest fresh capital in their businesses, purchase increased quantities of consumer goods, send their children for further education, and become increasingly involved in local and regional politics and planning. Thus the social dynamics of production and trade are modified as Panama's subsistence economy is woven into the global economy. What is the effect of globalization on African entrepreneurship? Are changes in production relations leading to changes in social relations? With what effects on local savings and investment patterns?

As in the story told in the prologue to this paper, local markets may offer more profitable arbitrage or rent-seeking opportunities for generating wealth than the opportunities available via export-oriented manufacturing. Salinger and Barry (1996) found that while a long tradition of "trading" has existed in West Africa, whereby business men and women take advantage of spatial, temporal, and policy-induced *arbitrage opportunities*, far fewer business men and women understand how to assess *market opportunities for manufacturing new products* and grow companies to take advantage of them.

One aspect of African culture which still predominates today is the emphasis on family and clan. Bates (1999) highlights, for example, that gross inadequacies in financial markets in Africa make the family (and by extension, the ethnic clan) the primary means for securing and allocating savings and investment. However, the present lack or inadequacy of other social institutions (e.g., systems of social and family protection to help families manage risks of market uncertainty, health, climate, old age, etc.) means that new found wealth must be shared among family/clan members. In order to improve incentives for individual investment and profit-seeking, new systems of social and family protection will have to be introduced to help families manage risks of market uncertainty, health, climate, old age, etc. The common refrain heard from the successful younger generation of African entrepreneurs is that they cannot expect to profit individually from or reinvest the profits of their own enterprises. What other aspects of the socio-culture must be strengthened in order to improve incentives for individual investment and profit-seeking?

Informal taxation by "corrupt" officials makes introduces additional costs to doing business. Branching one's business across borders (within countries, i.e. from one province to another, between countries within a region, or between regions) often means having to pay off multiple low-level public sector officials looking for bribes.²⁰ One solution is civil service reform, to eliminate redundancy and provide decent remuneration for those who remain in the civil service's

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²⁰ The West African Enterprise Network identified many such hidden barriers to trade. In addition, excessively high utilities, transportation, banking, and communications costs prove a real impediment to doing regional business (Orsini, Courcelle, and Brinkerhoff, 1996). See also a description of trade barriers to regional livestock exchange in Metzel and Cook (1994).

employ, in order to reduce the incentive to institute "private taxation systems" of economic agents. ²¹

Yet little of the present literature on African economic growth potential and constraints acknowledges that Africa's high-risk natural environment has led to the evolution of cultural practices and institutions that constrain African businesses from functioning efficiently along the lines of western-managed firms. Sachs (1999) talks about the effect of Africa's climate and geography risks on its (lack of) agricultural progress. However, there is also a link between risk, culture, and business entrepreneurship in Africa. Recognizing the social challenges facing African entrepreneurs today may help to identify areas that need strengthening in order to favor African participation in globalization.

This opens up a huge area for research. Greater emphasis must be paid in microeconomic case study work to understanding the socio-cultural factors which have helped to change the attitudes of those African business men and women who are moving beyond personal networks into global markets, increasing their market outreach by relying on depersonalized markets of suppliers and clients.

IV. Survey of Competitiveness Research Findings

The EAGER project has supported a number of micro-level surveys which have examined manufacturing in Africa. In some instances, some of the questions raised by these surveys have continued to be examined under different institutional or contractual auspices, results of which are also included here. Additional relevant work has been sponsored by USAID's Africa Trade and Investment Program, and by USAID's Global Bureau. The review begins with consideration of important research on entrepreneurship and export-oriented industrialization in Africa by the World Bank's Regional Program on Enterprise Development (RPED)²² and Wangwe et al. (1995).²³

In East Africa, EAGER-supported researchers compared the competitiveness of the manufacturing sectors in Uganda and Kenya, surveying sixty-three manufacturing firms (twenty-one in Uganda, forty-two in Kenya) across twelve distinct industries (Siggel and Ssemogerere

²¹ While civil service reform is one possible solution, Phillips (1998) describes how retrenchment in Africa and "transition economies" is viewed as an affront to the collective good. Given that these cultures place a higher value on group than individual welfare, it is considered a critical failure of the system if public, parastatal, or private entities have to lay off workers.

²² RPED focuses on four manufacturing sectors (textile and garment, food, woodworking, and metalworking) in nine countries [Cameroon, Côte d'Ivoire, Ghana, Kenya, Burundi and Rwanda (treated as one data set), Tanzania, Zambia, and Zimbabwe]. The program has published a number of discussion papers; see www.worldbank.org/afr/findings/french/rped.htm for a list of available publications. See also www.worldbank.org/afr/findings/french/rped.htm for Oxford University papers based on the RPED material.

²³ This work focused on Zimbabwe, Tanzania, Nigeria, Kenya, Côte d'Ivoire, and Mauritius. Firm samples covered industries of national importance and always included the textiles and clothing industry, to facilitate inter-country comparisons.

2000; Siggel, Ikiara, and Nganda 2000). Their methodology focuses on measuring firm-level unit financial and economic costs. These are then compared for representative firms in the same industry in two competing countries in the region. An alternative approach to competitiveness analysis in Uganda emphasizes the application of qualitative factors drawn from international and local best practice examples in specific industries to the development of strategies for competitive export market positioning (J.E. Austin Associates 1998).

In South Africa, EAGER supported competitiveness analysis of a strictly qualitative nature. The analysis focused on the textiles and clothing industries, which are typical of labor-intensive, export-oriented manufacturing industries which typically help developing countries become inserted in the global economy. In order to understand better the challenges facing rather established textile and clothing industries in South Africa as they prepare not only to confront greater competition on the domestic market from external suppliers but also to prepare for increased exports from South Africa to foreign markets, seventy-two firms were surveyed across three manufacturing regions of the country (Salinger et al. 1998). Special attention was also paid to firm-level innovation strategies as clothing firms in South Africa "learn to compete" internationally (Flaherty and Salinger 1998).

In West Africa, a series of analyses has been carried out, starting with the cost comparison methodology used in East Africa, and then evolving gradually to more qualitative and industry-specific profiles of commercial activities in textiles and clothing in Mali. Twelve Malian firms in ten different sectors were surveyed and compared with competing firms in Côte d'Ivoire (Cockburn et al. 1998). The multi-industry cost survey led to a second round of firm interviews in order to examine in more detailed fashion the factors inhibiting labor productivity in Mali (Coulibaly 2000). Taking its lead from the Cockburn et al. finding of potential comparative advantage for textile manufacture in Mali, prospects for development of Mali's textile sector have since been explored in depth using a more qualitative assessment of competitiveness (Salinger et al. 1999, Salinger 2000).

The rest of this section summarizes findings from each of the relevant studies.

A. Multi-country competitiveness analyses

African countries underscores an important distinction to be made between African exporters who sell across their borders in neighboring countries and Africans who manufacture goods for international clients. Wangwe et al. (1995) found that African exporters rarely develop their own products, nor do most export far beyond their regions. Rather, the bulk of non-primary product "exports" from Africa are actually goods produced under a regional scale import-substitution logic.²⁴ The distinction is important because African firms which export to regional neighbors are

not subject to the same competitiveness pressures of product development, quality, customer

Some general insights taken from the multi-country analyses of Wangwe and RPED help to set the scene. A comparison of the industrialization and exporting experiences across a number of

²⁴ This is similar to findings of studies of comparative advantage of Malian agricultural exports such as rice and livestock to West African regional markets (Barry et al. 1998; Metzel et al. 1997).

responsiveness, technology, etc., as firms which export to global clients. Export market destination (regional versus global) is therefore an important sample stratification variable. Because of this, some analysts find that whether a firm exports or not does not significantly affect its productivity (Biggs and Raturi 1997, p. 30), although this is likely because the distinction drawn above was not controlled for in their sample.²⁵

Wangwe also stresses the importance of African firm linkages with foreign partners as contributing to successful exporting experiences. Linkages can take many forms. In some instances, they enable an African manufacturer to produce internationally branded goods through an Original Equipment Manufacturer licensing agreement. Foreign commercial partners may specify equipment or technology investments they expect of their African suppliers in order to meet product quality standards. Foreign direct investment relations exist in some countries, although it is noted that the forms of such relations are changing, as the sharing of risk and production responsibilities evolve among multinationals, host countries, and partner firms. The case studies also highlight the risk associated with the conventional suggestion that Africa's exporting future lies in exploiting unskilled labor for labor-intensive manufacturing, pointing out that high-value, competitive export industries need increasing contributions from skilled managers and technicians, and that without an emphasis on training and workforce development, Africa's exporting future is far from assured.

Since the early 1990s, a large body of work undertaken in the World Bank's RPED has examined the economic and financial factors affecting entrepreneurial development in sub-Saharan Africa (Biggs et al. *various*). The most noted refrain from these studies is, "Africa Can Compete!", the title of two companion pieces on export opportunities in the U.S. and Europe for African garments and home furnishings products (Biggs et al. 1994). Cost analyses done by RPED suggest that lower labor productivity in Africa vis-à-vis Asia is compensated by lower wages, making standard garments (apparel which is not sensitive to fashion or season constraints) produced in Africa competitive in Europe and the U.S. Lack of cost disadvantages notwithstanding, Biggs et al. note that various microeconomic impediments persist to limit export growth, *inter alia*, difficult business environment, high transactions costs linking African firms to global markets, limited access to export finance, and infrastructure constraints.

In the short run, Biggs and Raturi note that a country's competitiveness is mostly a function of the exchange rate, given the longer time horizons involved in effecting changes in productivity (1997, p. 4). In the longer run, a comprehensive technology policy addressing training needs at national, industrial, firm, and individual worker levels is recommended.

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²⁵ In contrast, the ISA Group (1998), working with the same RPED database, finds that exporters in Cameroon, Ghana, Kenya, and Zimbabwe are more efficient than non-exporters.

²⁶ In fact, comparing labor costs and task-level efficiency among African countries seemed to rule out the francophone West African countries of Côte d'Ivoire and Senegal, where monthly wages (\$66-100) were significantly higher than in Zimbabwe, Kenya, and Ghana (\$30-75) or India (\$60). The data were collected in 1994, i.e. presumably *after* the CFA franc's devaluation.

B. East Africa competitiveness analyses

In **Uganda**, a survey of twelve industries and twenty-one firms revealed that five out of twelve of the industries (auto batteries, footwear, cement, animal feeds, and fish processing), covering a total of seven out of twenty-one firms, are competitive, i.e. financially profitable in the Cockburn/Siggel methodology, even with capital costs evaluated at market interest rates (Siggel and Ssemogerere 2000). Four other industries are within ten percent of being declared competitive (grain mills, bakery products, paints, metal products). Yet when costs are evaluated at border, not domestic prices, only Uganda's batteries and fish processing industries are "export-competitive." 27

Lack of competitiveness of Uganda's once-famous cotton textile industry appears to be due to the high cost of capital, as the country's largest integrated mill was bought out by an Indian firm and is still severely underutilized. Export competitiveness is also hampered in Uganda by being land-locked, implying higher transport costs. In addition, the rate of utilization of industrial capacity is extremely uneven across firms and sectors.

Uganda's government has been well aware of the need to set the right environment for growth. By the late 1990s, the Government of Uganda revised its Investment Code to shift focus toward export-oriented projects and to introduce more favorable incentives such as a rapid depreciation allowance and limit the powers of the Investment Authority. Uganda has also been in the forefront of African countries to articulate a poverty reduction program. The Poverty Eradication Action Plan for 1999/2000 to 2016/2017 emphasizes a macroeconomic environment of high, private sector-led and broad-based GDP growth, macroeconomic stability, competitive exchange rate, accelerated privatization, and increased public expenditures in infrastructure to provide the right environment for growth and poverty elimination. The 1999 draft of a more direct policy agenda for private sector development identifies measures for promoting the manufacturing sector, including export financing schemes, institutional support, increased inter-firm linkages, and increased access to and use of appropriate technology.

Despite these forward-looking strategies and despite general tax reform which has resulted in lower import duty rates, more uniform rate structures, the elimination of most exemptions, and the introduction of accelerated depreciation, Ugandan firm performance is hampered by a protective tariff structure which is biased against exports and thus encourages inward orientation. It also encourages tax evasion and smuggling, resulting in low effective collection rates. On the other hand, compared with Kenyan firms, Uganda's tariff reforms have been impressive such that Ugandan firms face fewer distortions than Kenyan firms. The overvaluation of the Ugandan shilling, exacerbated first by a coffee export boom and then by foreign capital inflows (both official aid and private capital repatriated by returning Asian investors), estimated at 20 percent in 1997, also contributed to anti-export bias. In addition, financial sector weaknesses, marked by a wide gap between deposit and lending rates, insolvency of local banks, problems of directed credit, the narrowness of loan portfolios, rationed credit with liquidity shortages, and a scarcity of

²⁷ "Export-competitive" means economically able to export to international or regional markets in the absence of all trade distortions. Exports to the region may be observed despite a lack of "export-competitiveness" due to distortions elsewhere in the region.

financial products, have hampered the financing of productive investments. Only 17 percent of such investments are financed via bank loans, while private financing covers another 61 percent (41 percent via retained earnings, 20 percent out of personal savings). Yet Siggel and Ssemogerere (2000) find that the cost of capital is even higher in Kenya, giving Uganda a relative advantage in this regard.²⁸

Physical infrastructure weaknesses are also cited by firm managers in Uganda as hampering their operations. They mention poor roads, the absence of an efficient rail service from Kampala to the Kenyan border, high costs of electricity and transportation, and frequent power service interruptions. Yet it is generally acknowledged that these conditions function comparatively better in Uganda than in neighboring Kenya, particularly with respect to telecommunications services.

As with Uganda, **Kenya** has undergone dramatic liberalization of the economy and launched an even stronger focus on industrialization since the early 1990s. The government produced a key document on industrial policy, the Sessional Paper No.2 of 1999 on the 'Industrial Transformation to the Year 2000'. The document highlighted some of the major constraints to industrial expansion and proposed a broad strategy for industrialization.

Although tariff rates have declined in Kenya from a trade weighted average of 30 percent in 1988 to 14 percent by mid-1999, there is still wide dispersion within the manufacturing sector. In addition, persistent quantitative restrictions result in high effective protection and a strong anti-export bias. A more market-based exchange rate was pursued in the 1990s, but by 1997 the Kenyan shilling was again somewhat overvalued. Financial sector issues are also critical in Kenya. Capital costs are high and quite distorted. With the nominal interest rate over 30 percent and inflation varying wildly, the real interest rate fluctuates strongly. As a result, more than a third of firms rely on retained earnings for 80 percent of their financing, according to the RPED.

Infrastructure weaknesses severely aggravate the Kenyan business community, leading to heavy private investments in generators, private telephone systems, water supplies, waste disposal, security, and the like.

For the Siggel sample as a whole, the calculations revealed no industrial comparative advantage. That is, shadow costs exceeded international reference prices by 17 percent. Comparing the 1997 survey with a 1984 comparative advantage study, Siggel et al. find that the financial costs of production of Kenyan industrial firms have increased, leading to a loss of competitiveness, or financial profitability. On the other hand, tariff reform helped to lower the cost of imported inputs,

private sector relations, and the need for business and entrepreneurship training (Beltchika et al. 1999).

²⁸ These findings echo observations from Senegal, which focus on infrastructure deficiencies (especially with regard to electricity and transportation), the lack of competent regulatory bodies to oversee competition policy in the wake of major utility privatizations, the lack of financial sector depth, unduly complex implementation of duty suspension schemes with regard to taxation of imported inputs for export-oriented manufacture, poor government-

²⁹ Anti-export bias notwithstanding, Glenday (2000) documents how customs systems reform in Kenya (changes in trade and administrative policy, including reductions in legislated duty exemptions, introduction of pre-shipment and secondary destination inspection programs, and other customs control programs) have led to increases in revenue yields even as import duty rates are lowered on average.

which reduced overall costs. Only four industries, rubber products, fruit canning, tobacco products, and some chemicals, appear to have economic costs below international reference prices. The substantial loss of export competitiveness and comparative advantage, compared with 1984, is attributed to high capital costs, exchange rate overvaluation, and distorted infrastructure and non-tradable service costs.

This cost competitiveness approach used by Siggel et al. in Uganda/Kenya and Cockburn et al. in Mali/Côte d'Ivoire is helpful for understanding broad patterns with respect to protection, the effect of exchange rates on shadow costs, and patterns of productivity across industries. However, such an approach is less apt for understanding qualitative, management, or industry-specific factors affecting competitiveness.

In contrast to the cost competitiveness approach, J.E. Austin Associates applies a Porterian or qualitative analysis to developing competitive export market strategies for **Uganda** (J.E. Austin Associates 1998). The firm uses a case studies approach, combining firm interviews in Uganda with international industry profiles in five traditional and non-traditional sectors (coffee, fish, cut flowers, tourism, and manufacturing). Their approach focuses at the micro-level on the potential for increasing value through targeting specialized market segments, adding product and service features, moving commercial activities closer to the end-user, identifying unique products, and other non-cost elements of competitive strategy. For Uganda's manufacturing sector, Austin explored opportunities for manufacture of processed foods, low-cost textiles, footwear, and construction-related products for export within regional markets. At the macro-level, they analyze policies, institutions, infrastructure, and human resource capabilities which affect firms' abilities to take advantage of new opportunities.

Both Siggel/Ssemogerere and Austin analyses explore macroeconomic policy variables related to competitiveness, such as fiscal stability which has resulted in sharply lower inflation rates, interest rates which remain high and appear to be discouraging investment, the extent to which the government crowds out private consumption, and tax rates. In reviewing the country's openness to trade and investment, they note a series of steps which the country has taken to integrate its economy more closely into the global economy, such as trade policy reform, membership in international trade fora, and increased openness to foreign investment. Yet Uganda's business climate is still more constraining than encouraging of private enterprise creation, legal and regulatory protection of private business rights is low, and the perception of overall risk is still quite high in Uganda. Financial sector inadequacies are high resulting in both limited access to and high costs of capital. Infrastructure and human resource capacity limitations are also noted.

Case studies within four of the five highlighted sectors identified a number of best practices by Ugandan entrepreneurs which exemplify competitive behavior. These include:

a Ugandan specialty coffee company which uses a retail café outlet to monitor local consumer
preferences, has invested in quality roasting equipment, trains his retail staff, offers his staff
incentives to promote excellent customer service, and is developing collaborative alliances
with coffee producers to insure top quality supply of beans;

- Ugandan flower growers are seeking more direct marketing linkages to end-consumers as a
 means of learning customers' needs and preferences, diversifying the export good from simply
 bulk shipments of roses to packaged/labeled bouquets of more diversified blossoms, and
 anticipating evolving foreign demand trends;
- recognizing that the export of chilled and frozen lake fish can be hampered by food safety/quality concerns in consumer markets, one Ugandan company has innovated a system of offshore platforms for buying fish catch directly from fishermen, thereby avoiding contamination and spoilage concerns when the catch is sold on-shore;
- in order to stimulate the Ugandan tourist industry to develop beyond its passive marketing of its natural wealth, one tour provider offers eco-tourism white water rafting trips on the Nile that appeal to a broad range of potential foreign visitors.

On the other hand, in each of these four sectors, plus manufacturing, many of the characteristics of non-competitive industries are exhibited. Ugandan business men and women are largely isolated from world markets, and therefore understand little about product innovation, niche marketing, customer targeting, etc. They tend to rely on exports of primary products, with little value-added processing and little done to move into more powerful positions in the marketing value-chain. The adoption of grades and standards systems is lacking, leading to an inability to identify exporters of quality products or services. Recognizing that the local market opportunities are quite limited for their products, firms are suspicious and engage in heavily predatory practices, rather than seeking to collaborate and develop productive cluster relationships linking suppliers, processors, marketing agents, and end-consumers. Research and development and workforce development efforts are either weak or non-existent.

C. South Africa competitiveness analysis

Multi-industry studies of manufacturing sector competitiveness were not carried out in South Africa under the EAGER project. Instead, research combining quantitative and qualitative competitiveness analysis focused on identifying best practices in South Africa's textile and clothing industries (Salinger et al. 1998). These industries have previously benefited greatly from domestic market protection and now face increasing competition from legal (and illegal) imports as South Africa rejoins regional and global economies and prepares for export. These industries in South Africa are quite highly developed relative to those found elsewhere on the continent, yet they are similarly ill prepared for global competitiveness challenges because of their years of commercial isolation from outside markets.

The original research plan for this study called for a cost analysis to be undertaken as part of the firm surveys. However, this part of the work was not carried out for a number of reasons. Although many South African firms are familiar with productivity measures of performance of machine operators, managers proved reluctant to share sensitive cost information with researchers. Moreover, even if cost data had been collected, comparing domestic costs of production with appropriate international references would have been a daunting task given the highly distinguished products and product qualities across the sample. Thus the study focused on understanding qualitative aspects of firm competitiveness and identifying best practices in a range of areas.

In 1997, when the survey work for this study was conducted, South African businesses were still novices at exporting.³⁰ While a few firms were experimenting with foreign licensing (rather than physical export) of a successful South African brand, or domestic licensing of foreign brands with the eventual goal of taking those names overseas into new markets, the vast majority of businesses were focused on the domestic market and did not care or know how to penetrate export markets. This means more than simply coming up with "competitive products" to sell abroad, but rather means learning how to penetrate the global supply chain with effective service and support to the client importers overseas.

Economic issues facing the textile and clothing industry in South Africa in 1997 echoed those found elsewhere on the continent. In general, South African industries felt penalized by economic policy instability. Stability, or at least predictability, of macro and sectoral variables such as exchange rates, interest rates, wages, tariffs, etc. is necessary to minimize risk, encourage exports, and facilitate longer range planning. Clothing firms were also heavily penalized by escalating tariff structures, which protect domestic raw material processors and input manufacturers against imports. This penalizes clothing firms which often prefer, for various reasons including quality and service, to access fabric and trims inputs from foreign suppliers. Access to foreign suppliers at world prices is a critical component of the success of major exporting countries.

In terms of firm strategy and rivalry, South Africa's textile and clothing industries are organized into separate professional associations, although they have increasingly worked to think strategically as an integrated fiber-fabric-apparel pipeline.³¹ This implies that the interests along the chain should be convergent, which is not necessarily the case. Moreover, forging a convergent strategy for the pipeline could be a strategic blunder for the clothing industry, whose competitiveness could be hampered by the lagging competitiveness of South Africa's textile industry. It may well be that clothing's future will involve increasing reliance on fabrics imported from the world market. Thus, each industry should focus on independent competitiveness strategies. It is also clear that the clothing industry in South Africa was missing several product niche opportunities (*inter alia*, Mandela shirts, Afro-centric designs in clothing, Afro-centric clothing itself, wildlife/sportswear motifs,...), both in domestic and foreign markets.

While the South African government does offer certain incentives to compensate exporters for import duties (duty credit certificates) and export marketing incentives, support for applied technology research and development for the industry is lacking. Such R&D is critical to the sustained competitiveness of the U.S. industry, and should figure high on the list of public-private partnerships in the textile and clothing industries in South Africa.

Most South African firms are continuing "business as usual" in the face of increased pressure to compete globally. A subset of firms is experimenting with alternative ways of doing business. For

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³⁰ Total U.S. apparel imports from South Africa in 2000 were up by 50% over 1999. "South Africa to benefit from duty-free access to U.S. market," *Business Day*, March 5, 2001.

³¹ And were directed to do so in the mid-1990s by the national Department of Trade and Industry when policy negotiations with government highlighted their distinctly different needs and interests.

some, this means moving part or all of their manufacturing off-shore, within southern Africa. This "NAFTA-ization" strategy allows firms to take advantage of lower wage rates in neighboring countries and, in some cases, preferential duties back into the South African market. Of those remaining in the higher-wage urban areas in South Africa, many firms are moving out of the formal into the informal sector. This move to subcontracting allows firms to avoid the labor protection and wage agreements of the collective bargaining agreement with the country's textile and clothing workers' union. Rather than developing an export capacity to expand markets, some elements of the industry are retreating into cost-cutting strategies rooted in the squeezing of labor.

More dramatic changes are evident in the structure of inter-firm relations. Subcontracting is becoming a way to move production out of urban areas or even out of South Africa altogether. Unfortunately, rather than develop long-run and reciprocal relations with subcontractors, relations as described by the majority of the subcontractors in the survey are short-term and one-sided. The cut-make-and-trim firms on which the design and merchandising firms rely for assembly labor tell a consistent story of being squeezed by the firms they supply. As competitive pressure mounts in a declining industry, subcontractors find their margins falling even as their costs rise. In addition, they see themselves victimized by ever shorter delivery times and threats of cancellation of orders that are as little as two days late. The large firms that subcontract report a similar experience. They take the position that they, too, are squeezed between the mills and the retail sector, both of which are highly concentrated and protected. Thus, rather than developing innovative inter-firm relations that build on reciprocity and trust to achieve productivity, South African firms are moving backward toward increasingly unbalanced relations in which subcontractors are selected for their low costs over any other attribute.

For another subset of firms in South Africa, confronting globalization pressures means focusing on process innovations. Some companies focus on developing new product lines, others have invested in new information management systems and inventory control methods which allow Internet-based communication between supplier and retailer. There is outreach by some firms to develop new overseas market contacts to input suppliers and final clients. Some firms recognize that innovation can come about by introducing new means of ordering work flow through the shop floor and new forms of labor relations to improve worker productivity. Training is needed at both management and worker levels. Management needs help in a wide range of modernization efforts, including in realizing how its workforce can be a potential source of valuable innovation ideas, thereby improving productivity, increasing profitability, and ultimately resulting in higher wages for a more highly skilled workforce. ³³

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³² Abernathy et al. (1999) stress that companies which have developed new information systems and management practices are the ones with the strongest performances today.

³³ In an econometric analysis of the effect of training on firm productivity in 200 firms in Ghana, Kenya, and Zimbabwe, investment in both training and technology is shown to have a positive impact on firm value-added, yet such investments remain quite limited in these countries (Biggs et al. 1995; Biggs and Raturi 1997). Although virtually all new shop-floor employees are put through some kind of training, multinational and larger domestic firms are the only ones that engage in any formal worker training. Of this, most training is directed to skilled personnel. Investment in technology acquisition is also rare, whether in terms of local research and development or in terms of acquisition of access to foreign technology licenses and technical assistance. Adaptive technology investments, on the other hand, i.e. tinkering and re-engineering, are common.

Decentralization within a factory, the change more closely linked to innovation and flexibility, is uncommon and there is little evidence of shop floor supervisor discretion in setting work flows. However, true innovation experiments with labor relations are rare. A few firms are experimenting with alternatives to the traditional bundle system requiring simple changes in the organization of the line rather than computerized delivery systems. One firm in the sample, a woman-owned and -run business, provides for machinists to become multiskilled voluntarily and almost invisibly by allowing workers to use left-over material during their lunch hour to make their own garments. This sets in motion forces that may generate multiskilling naturally as an outgrowth of the interests of the workers themselves.

More generally, South African firms innovate through the acquisition of new machines rather than through new forms of labor organization. The impetus for such investments comes from product changes that require new machines to perform new operations. In all but the largest firms, flexibility is achieved largely through adaptation of existing machines to new functions, a good example of learning-by-doing. In line with other industries, larger clothing firms innovate less incrementally and more by radical changes in machinery. Radical innovation occurs mainly through computerization of marking and cutting or design. Workers in these phases of the production process are retrained to operate the new machines and thus are reskilled by the innovations.

What we find in the South African clothing industry, then, is a pattern of innovation that is largely limited to changes in machinery. While such innovation in many cases does embody learning-by-doing and incremental change in the form of adapting existing machinery rather than buying expensive new equipment, it leaves untapped significant labor resources and potentially productive new forms of inter-firm relations.

D. West Africa competitiveness analyses

The analysis by Cockburn et al. (1998) suggests that **Mali**'s manufacturing sector has very little comparative advantage. The first economic issue is with respect to trade policy. Despite substantial reforms that have led to a more open and transparent trade regime, it is still a relatively complex regime which protects existing industries by strongly taxing imports of competing products and lightly taxing imported inputs. The import-weighted average official tariff in Mali is 15.2 percent, whereas the corresponding applied tariff rate (i.e. based on actual tariff revenue collections) is only 10.4 percent, reflecting the importance of tariff exemptions. The weighted average applied tariff in Ivory Coast is slightly lower at 8.2 percent. There is wide dispersion of applied rates across sectors, from mining with the highest rate (28%), followed by manufacturing (10.5%) and agriculture (5.6%).

Exchange rate and financial sector development issues are also of concern. Mali's resurgent growth was stimulated by the devaluation in 1994, which reduced costs when expressed in foreign exchange terms and helped to encourage exports. Careful monitoring throughout the CFA franc zone will be required if a resurgence in overvaluation and thus anti-export bias is to be avoided. Malian firms are also penalized by an underdeveloped financial sector. Financial liberalization

would reduce market interest rates and increase the supply of alternative financial instruments, thus allowing Malian firms to turn to more stable and long-term sources of finance. Investment in Mali, for example, depends more on access to interest-free supplier credits than on bank lending.

Increased exposure to competitive pressure from regional trade integration and global trade liberalization should reduce inefficiencies. Yet short-run simulations of the impact of trade liberalization cum exchange rate realignment on costs suggest that under present conditions a number of Malian firms would be rendered "locally uncompetitive", i.e. financially unprofitable in the domestic market. Partially offsetting this decline in local competitiveness would be an increase in export competitiveness given the reduction or elimination of tradable input and asset tariffs and, possibly, exchange rate distortions.

In general, Côte d'Ivoire appears to have a greater comparative advantage in manufacturing activities than Mali. The cost analysis reveals that only two of the ten Malian industries analyzed (printed fabric and sheet metal) indicate a comparative advantage. In addition, Mali is close to having a comparative advantage in five of the remaining eight products analyzed (vegetable oil, wheat flour, confectionery, carton packaging, and printing). Where Mali has a comparative advantage in sheet metal production, Côte d'Ivoire does not. Mali's performance in the printed fabric industry is comparable to that of Côte d'Ivoire, suggesting that there will be strong regional competition in this industry under liberalization. Among the five industries in which Mali is close to having a comparative advantage, Côte d'Ivoire is also close to having a comparative advantage in three cases – vegetable oil, wheat flour, and cartons – with almost identical shadow unit costs. Mali clearly lacks comparative advantage in three remaining industries, all of which are chemicalbased industries, e.g., plastic shoes, plastic bags, and paint. Côte d'Ivoire already has a comparative advantage in two other cases, e.g. confectionery and printing. Thus regional competition in these industries will be tough for Malian producers even if they manage efficiency improvements. And Côte d'Ivoire is close to having or already has a comparative advantage in the three industries in which Mali has a strong disadvantage, further endangering these industries in Mali.

Lack of Malian comparative advantage is attributed by Cockburn et al. to the low labor productivity of Malian firms, relative to Ivoirian ones. Malian firms compensate for such low productivity with wage rates which are one-fourth the levels of Ivoirian wages. Malian firms must also contend with higher capital costs, due almost exclusively to lower capital productivity. The issue of poor relative labor productivity in Mali is further explored by Coulibaly (2000). His survey results reveal issues of management, labor training, and the more general business environment. Firms indicate that effective management is thwarted by equipment obsolescence and machine breakdowns. Firms complain of having to convert from electrical to manual equipment operation because of a lack of availability (or availability at high cost) of required spare parts on the local market. The high investment cost of new technologies is cited as a further constraint, as is the concern with regard to future exchange rate risk. The limited consumer market results in low capacity use rates by most firms (the survey average for capacity use rates is just 50 percent).

The lack of effective professional training programs is also cited by firms as a factor in the labor productivity equation. Unskilled workers are usually trained on the job. Any more formal training must be undertaken privately, which is costly. On the one hand, firms complain about the lack of creative initiative by workers. Yet they also acknowledge that in some instances, workers are creative tinkers who can invent new ways of getting around breakdowns of equipment. While most managers may have some basic knowledge of financial analysis and computers, more sophisticated skills with respect to technology and equipment are lacking.

Malian firms explain that while labor productivity may appear to be low, it is not the workforce per se which is to blame. Production maximization is thwarted by a host of general business environment factors. Industrial zones are underdeveloped, effective industrial infrastructure (fire, waste, water) is lacking, and regular electricity blackouts oblige firms to bear significantly higher costs for private diesel generation. General concerns also cited include lack of competition and pervasiveness of fraud (as in the case of illegal cloth imports into Mali, for example), the high costs of trucking, delays in delivery due to truck breakdowns, and tax and regulatory burdens.

Coulibaly concludes that worker training alone is an insufficient strategy for addressing the labor productivity problem in Mali. Adaptation, or complete renovation, of capital equipment is required to raise labor productivity, which further means that the macroeconomic conditions must be auspicious to encourage such investments.

Because cost simulations in the Cockburn et al. analysis also suggested that Mali's textile industry could become export competitive under a trade liberalization scenario, additional analysis was undertaken regarding prospects for textile exports beyond West Africa (Salinger et al. 1999). However, closer inspection of Mali's competitiveness position in textiles and value-added products by industry specialists suggests that the economic, business, and technical challenges in exporting textiles from Mali remain daunting. Mali excels at producing cotton fiber, but processes very little domestically. Of the two integrated textile mills which existed in 1999, only one (a Sino-Malian joint venture) was operational. A Bresilo-Japanese joint venture spinning plant was under negotiation, with foreign investors pressing Malian authorities for access to fiber at guaranteed domestic prices substantially below FOB value.

Closer study of Mali's textile sector highlighted a number of economic issues, including the need to understand evolving global trends affecting the international textile and clothing industries, the problem of variable capacity in world cotton fiber markets which creates instability in world fiber prices and thus Mali's terms of trade and domestic cotton fiber prices, the need to understand the potential impact of changes in regional and international trade agreements on Mali's access to export markets for textiles and clothing, workforce development needs, and the most strategic use of subsidies for achieving employment and developmental objectives.

From a technical perspective, Malian firms need to make major new investments in plants and equipment in the downstream processing sectors or at least consider process innovations which could improve efficiency and increase returns to ginning and spinning/weaving operations. The range of textiles currently produced in Mali is of low quality. While appropriate for low-income, rural consumers in Mali, it is not exportable into the global garments market. However, a wide

range of international industrial applications for the unprinted greige fabric are possible (e.g., interlinings, pocket and waist banding, upholstery substrates, mattress ticking, etc.), pursuit of which would require downward revision of Mali's FOB price (Abidjan) which in 1999 was not competitive with Asian FOB prices for a comparable quality good. Closer examination of Mali's FOB price (Abidjan) for such quality suggested that Mali was not cost-competitive internationally with Asian suppliers.

The present emphasis on fiber, thread, and basic cotton fabrics and garments is a commodity-based strategy. Production in each of these product groups has already been taken to a large and highly industrialized scale by Asian and American producers. Mali's comparative advantage is likely not in these capital-intensive industries, given the high cost of capital and the relative lack of attractiveness of Mali as a recipient of foreign investment. Moreover, Mali's costs of production are *not* as cheap as is commonly believed. Low-end cotton-based manufactured goods are produced in Asia much more efficiently and with labor which is even cheaper than in Mali.³⁴ This rules out Mali's ability to compete on labor value-added processing alone, as in the large-scale manufacture of commodity clothing such as lower priced T-shirts and jeans. Infrastructure and export logistics problems present an additional level of complication, especially for goods which require quick order replenishing if they are to satisfy demanding retailers in industrial markets.

On the other hand, Mali's non-industrial spinning, weaving, dyeing, tailoring, and embroidering enterprises, which produce goods of higher quality than the formal textile industry, have greater potential (Salinger 2000). Specialty products designed with respect for artisanal traditions play off Mali's unique cultural attributes, which distinguish them from mass-produced goods made elsewhere. Capitalizing on the country's cultural attributes to sell unique, more refined products into higher priced markets for home furnishings and simple garments may help Mali compete both because of the higher price points and because of the less demanding supplier requirements outside of the basic and fashion garments markets. 35 However, successful international marketing of these goods will require innovative approaches. Products must be designed for a broader international consumer, rather than the typical tourist buyer who comes to Mali. While an artisanal or Afro-centric flair is marketable, adapting those design characteristics to products developed for a more general consumer in the U.S., who has an international sense of aesthetics but does not want an overly African look, is critical. Malian exporters who have limited interaction with U.S. and European gift, home furnishings, and apparel markets despair of being able to master these commercial strategies. However, a number of interesting partnerships are developing under the aegis of the U.S. government's Africa Trade and Investment Program to encourage commercial partnerships which would help to overcome some of these knowledge gaps.

³⁴ In December 2000, an industrial sewing operator wage in a formal clothing firm in Mali was 40,000 CFA per month, i.e. \$2 per day, which is twice the wage of similar labor in Bangladesh or Madagascar.

³⁵ Breaking into the international garments industry is exceedingly challenging. A preferred approach for gaining exposure to international markets is to begin exporting simple products which do not require great sophistication to manufacture. Simple household textiles (such as bed linens and tabletop accessories) and straightforward leisure wear with a minimum number of design elements are easier to trust to newcomers in international manufacturing. As these new suppliers prove their ability to compete, more complex products can be contracted out to them.

From a manufacturing perspective, a number of issues persist. The domestic supply of key inputs such as thread and fabric is limited in quality and color, and the local textile mill lacks experience responding to custom orders. Training of artisans, laborers, marketing middlemen, and exporters is necessary to insure that products are shipped which are of acceptable quality and respond to production specifications determined by the overseas client. Exporters need to understand international marketing margins if they are to price their goods realistically for export. Solutions must be found to the lack of availability of trade financing from the banking sector, which leads Malian exporters to expect 50 percent advances before fulfilling orders, contrary to international practices. Finally, air freight is the only reliable means for exporting higher valued goods from Mali in this sector, further adding to costs.

Research on competitiveness issues in Mali has now spanned several years. The result of this body of analysis has been greater insights into the microeconomics of manufacturing production in Mali, especially in the textile and clothing industries. Conclusions drawn from preliminary crossindustry analysis of cost and tariff structures have been refuted or refined upon closer inspection. This in turn leads to recommendations that go beyond government policy reform, but rather which are tailored to specific commercial environments. At present, USAID/Mali and the Global Bureau are supporting commercial cluster development efforts among artisanal and semi-industrial value-added processors which hold promise for Mali's ability to learn to compete in international markets for home furnishings, garments, and gift products (Salinger 2001b).

V. Analysis of Determinants of Foreign Investment

Many have made the argument that foreign investment is crucial for successful entry by new developing countries to global markets. Benefits attributed to these capital flows include new consumer market access, new product information, and new technologies (Mytelka, Ernst, and Ganiatsos 1998; Oman 2000).

Yet Africa's lack of success in attracting foreign direct investment has already been noted. What flows have gone in have largely been for resource extraction activities. An institutional fitness model to predict the responsiveness of foreign direct investment inflows into Africa to political and socioeconomic variables has been elaborated (Wilhelms 1998). A study of the U.S. electronics and textiles industries helps to explain the factors they take into consideration in making FDI and commercial linkage decisions (McMillan et al. 1999). More geographically focused is the analysis of determinants of foreign direct investment in East Africa (Phillips, Obwona, and McMillan 2000).

A. Model to predict foreign investment receptivity

A model of "institutional foreign direct investment fitness" predicts how likely a country is to attract foreign investment inflows (Wilhelms 1998). It tests the thesis that it is not always the largest countries that obtain the most FDI, but those who make themselves the most "fit" to

³⁶ Whereas in Asia, trading companies have played an important role in providing such pre-financing, trade intermediaries who can provide such services in these sectors are still rare in Africa. (Biggs et al. 1996, p. 46)

receive it.³⁷ In the model, net FDI inflows measured as a percentage of Gross Domestic Product are posited to be a function of: ³⁸

- *Socio-cultural fitness*: This is the most diffused, complex, and all-encompassing institution, represented in the model by regional dummy variables.
- *Educational fitness*: Education builds human capital and prepares it for successfully handling the rapidly changing global economy. By enhancing productivity and efficiency, education indirectly affects the outcome of FDI operations. The variable included in the model is primary school enrollment as an indicator of breadth of basic education.
- Market fitness: It is postulated that open, competitive markets with protective regulation will attract more FDI than markets subjected to directive regulation. Economic and financial variables in the model include per capita Gross Domestic Product (level of economic development), total population (market size), urban population, rural population density, foreign trade, tax revenues as a percentage of GDP, domestic credit provided by the banking sector as a percentage of GDP (credit availability and degree of financial intermediation), and commercial energy use.
- Government fitness: Investors focus on government as the primary source for policies shaping
 the business environment affecting business expansion, trade, investment, rule of law, etc.
 Variables considered include the economic openness index and the international country risk
 guide index.

The econometric results corroborate the FDI fitness hypothesis. Structural variables reflecting conditions that are intransigent over long periods, such as total population, show little significance throughout the regressions. Regional dummy variables are also insignificant. Variables more explicitly related to institutional development, namely urbanization and rural population density, are positively and robustly correlated with FDI.

Policy-making and implementation also exert a very strong influence on FDI. Economic policies allowing free investment and trade are key determinants of FDI inflows. Countries with minimal controls on currency flows and on imports and exports are more likely to receive FDI. Trade volume shows a positive, robust correlation with FDI. High taxation, assessed chiefly in the form of trade taxes in developing countries, deters FDI. These results demonstrate that a country can reap substantial FDI rewards by choosing a more open trade and investment regime. The positive, robust correlation with energy use shows an additional opportunity for governments to increase FDI inflows, namely through infrastructural development.

Variables related to the economic, legal, and administrative spheres have very high explanatory power. Governmental fitness, specifically of the judiciary and executive branches (rule of law and incidence of corruption), consistently shows its impact on FDI inflows. This stresses the

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³⁷ Being fit connotes being awake, reacting swiftly to dangers and opportunities, and being creative and flexible in carving out a niche for themselves in which they can survive against competitors.

³⁸ A cross-section ordinary least squares analysis is run with variables and data for 1978-1995 selected from the World Bank's *World Development Indicators 1997*. Controlling for countries with foreign direct investment inflow data available for the entire period, the sample includes sixty-seven developing countries.

importance of impartiality and transparency in the legal framework and in policy implementation. Governmental fitness, strong institutions making and implementing sound policies and laws, is key to increasing FDI inflows. Legal and administrative equity and transparency implies a fair and stable rule of law and low corruption.

Nearly all of these determinants reduce incentives for discretionary behavior and rent-seeking. This gives another dimension to the adage that investors seek stability and transparency, since they prefer clear-cut regulations and consistent implementation even at the cost of losing individual privileges gained through special deals. This preference can be attributed to the reduced business efficiency caused by an insecure environment that requires extensive bargaining and crisis management.

B. Global production networks in labor-intensive manufacturing industries

McMillan, Pandolfi, and Salinger (1999) surveyed representatives of the U.S. electronics and clothing industries to discern what influences U.S. manufacturers' attitudes when choosing emerging market partners with whom they would like to develop commercial relationships.

Interviews highlighted the prevalence of globalized production networks in both industries. Complex manufacturing today takes place with numerous countries contributing some component or input into the manufacture of a final good. The existence of these networks in a region can have important positive welfare implications for developing countries, as they facilitate the formation of local workforce capabilities.

Increasingly demanding requirements of global competition are reshaping the structure and nature of competition in both the electronics and clothing industries. An increasing number of firms focus in the U.S. on their core competencies in research, design, and quality assurance and subcontract out remaining tasks to more specialized firms. Both industries face shorter and shorter product cycles and the need for quicker and quicker speed to market.

Firms are forced to adapt their organization of production to cope with the increase in complexity and risk. Such changes have had far-reaching implications for market structure. There has been a shift from partial to systemic globalization in the industry, characterized by international production networks. Computer firms now have a vested interest in the maintenance of their regional supply bases in Asia. Clothing companies are finding that regional suppliers are key to supplying their clients, the retailers, in an efficient manner. This means that regions of the world now have to compete for investment on a global scale with other regions. If one region has developed a critical mass of specialized capabilities, this is likely to lead to a virtuous circle. Participation in global production networks can thus help the regional cluster establish the missing links to a variety of complementary assets. Equally clear is the fact that those regions that cannot provide such capabilities are left out of the circuit of international production.

Intense and increasingly global competition has led to more opportunities – albeit of an increasingly sophisticated nature – for developing countries. Manufacturing opportunities for developing countries still exist, but their skill requirements are not limited to the traditional, low-

skilled jobs that once characterized labor-intensive manufacturing. With increasing automation in manufacturing, the existence of cheap labor overseas is no longer sufficient for attracting FDI. Many new higher skilled engineering and manufacturing opportunities now present themselves for low-income countries. Clothing companies work through a complex global web of brokers, overseas subsidiaries and joint ventures, and foreign commercial partners to source and produce apparel items. As competitive pressures drive product cycles down, it is no longer sufficient to offer a low-cost production platform or even such institutional facilitation as export processing zones or tax incentives. Local labor, skilled and unskilled, must be able to respond to the requirements of the global marketplace. Foreign firms are expected to be able to manage input supply channels, respond rapidly to revised design specifications communicated in from overseas or actually handle product redesigns themselves, handle inventories on behalf of the client, deliver with minimal quality flaws, etc. The emergence of a whole new range of qualitative competitiveness variables to which developing countries must now pay attention as they compete among themselves to attract FDI, means that labor workforce training at all skill levels is becoming essential.

Some developing countries initiated their foray into international markets by pursuing specialized export-oriented institutions, such as export processing zones.³⁹ In others, some international companies prefer working outside those zones in order to get the best priced product. Still other developing countries found their access to the U.S. consumer market greatly enhanced when preferential trade arrangements were concluded with the U.S., leading foreign multinational corporations (MNCs) to relocate inside the preferential trade area, lured by the tariff advantages into the final market, bringing their capital and management know-how.

In light of these evolutionary patterns, why are some developing regions of the world still being left out? There is a minimum level of infrastructure development and political stability required for a country to be considered.⁴⁰ In general, countries in Africa do not pass this test, whereas a large number of countries in Asia, Latin America, and Eastern Europe now do. Competition among the latter for FDI and for global commercial networking is fierce.

Once the minimum acceptable level of infrastructure and political stability is met, other country-level factors that make a difference include:

• reputation for managerial skill

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³⁹ From Radelet (1999, p. 40): "Export platforms are not perfect solutions. Many exporters do not develop backward linkages to domestic suppliers, and some firms face difficulties in taking advantage of platform facilities (especially small and medium scale firms wishing to continue to sell some of their output domestically). Nevertheless, experience in well-managed export platforms in Asia and elsewhere has shown their effectiveness in creating export-related jobs, and in promoting rising real wages of industrial workers as experience and productivity rise. The most successful countries have seen sustained increases in manufacturing wages, and a shift towards more highly skilled production processes. Export platforms alone do not generally solve a country's unemployment and development problems, but they can make an important contribution both directly and through their demonstration effects to other exporting firms."

⁴⁰ These are also cited by firms participating in the *Africa Competitiveness Report's* Executive Survey (Sachs and Sievers 1998).

- skilled labor cost and availability
- degree of entrepreneurship
- reputation for unskilled labor productivity and quality
- enforcement of intellectual property rights
- power of labor unions
- government corruption
- existence of preferential trade relations vis-à-vis the end market(s) of interest

Most firms monitor potential new markets on a regular basis, especially as labor costs in Asia have been on the rise. While all manufacturers/importers surveyed by McMillan et al. are active in Asia and Latin America, almost none have working relations in sub-Saharan Africa. The general impression conveyed by the survey is that while production costs in sub-Saharan Africa may be lower, longer and less reliable delivery times as well as lower quality of the product would not make up for the difference in final price. Nevertheless, especially in the face of rising production costs in Asia, a very few firms are at least exploring the possibility of dealing with manufacturers in Africa, finding its cost potential quite interesting.

The McMillan et al. work also suggests several ways in which policy makers *in the U.S.* can enhance the ability of developing countries to take advantage of global production network opportunities. For instance, U.S. policy makers could enhance foreign direct investment and global commercial initiatives by a broader range of U.S. firms abroad by recognizing manufacturing industries (such as textiles and apparel) as truly global endeavors, instead of just viewing them as 'U.S. strategic interests' and feeling obliged to defend import substitution interests. U.S. MNCs which manufacture abroad need to know that their exports back into the U.S. market will not be penalized by tariffs or sudden imposition of quotas when import levels suddenly become non-insignificant. U.S. policy makers can also facilitate overseas investment and operations by helping to forge an international consensus regarding international labor codes of conduct.⁴¹

A third area where U.S. policy makers can be helpful is in providing preferential access to the U.S. market for our most vulnerable trade partners overseas, such as provided under the *Africa Growth and Opportunity Act (AGOA)*. Passage of AGOA in 2000 has led to a flurry of activity by potential African exporters seeking to understand the language of the act which limits its benefits to countries and exporters which adhere to the strict country of origin, information reporting, and policy reform requirements. The granting of preferential market access by no means guarantees export success, but it is an important first step (Salinger 2001a).

⁴¹ The rising crescendo of consumer awareness and negative publicity about sweatshops led the Clinton Administration to establish the Apparel Industry Partnership (AIP) in 1996. Comprised of corporate (apparel and footwear), NGO, and labor representatives, the AIP issued a voluntary Workplace Code of Conduct in November 1998 (http://www.dol.gov/dol/esa/public/nosweat/partnership/report.htm), taking stands against use of forced labor and child labor (age cut-off as defined by local labor laws), against harassment and discrimination of labor, and in support of minimum wages (again, as defined by local labor laws) and a maximum 60-hour work week. Principles of monitoring and standards for independent evaluation monitors were articulated.

C. Interactions between foreign and local investment in East Africa

In further trying to understand factors affecting foreign investment in Africa, Phillips, Obwona, and McMillan (2000) explored the interactions between foreign and local investment in East Africa. Extremely low domestic savings rates in developing countries leads developing country governments to despair of raising local investment rates. They pursue foreign investment instead, which comes at some non-insignificant cost to their economies, given various concessions and incentives offered to attract multinational companies and investors to their shores. Phillips et al. ask whether foreign direct investment squeezes out local investment, or conversely opens up opportunities for them. They also hypothesize that local investment might sometimes take the lead, such that an improvement in the business climate which stimulated local investment might act to attract FDI. These notions were explored via statistical analysis of investment data from 110 countries (1970-1996) and case studies in Mauritius, Uganda, and Kenya.

The statistical analysis finds that FDI does act as a catalyst for local private investment. A 1 percent increase in FDI as a percent of GDP results in a 0.8 percent increase in future domestic investment in Africa and as much as a 1.17 percent increase in Latin America. For developing countries, the impact of lagged FDI on domestic investment is more than two times the impact of lagged domestic investment on domestic investment. However, the reverse correlation does not hold. There is no statistical confirmation that surges in domestic investment attract FDI.

The Mauritius case study suggests that institutional innovation (e.g., creation of export processing zones) was an insufficient condition for attracting FDI. Only when accompanied by economic reforms did industrialization finally take off. Hong Kong/Taiwanese textile firms and South African hotel chains brought knowledge of global markets, management, knowledge of customers and competitors, and worker training standards. Domestic investors of all ethnic backgrounds unanimously reported that they were not squeezed out by foreign investment. On the contrary, they worked with, learned from, and in many cases eventually bought out foreign investors. Additional institutional factors contributing to the positive climate for investment included consistent application of the rule of law, a sturdy financial sector, and solid basic education which *inter alia* prepares multilingual workers. The latter was key for productive interactions between Mauritian workers and foreign managers.

The Ugandan case study indicates that the private sector there is quite upbeat about its relations with foreign investors. Local firms report that linkages with foreign firms give them access to foreign technology, management, equity capital, and training, as well as access to export markets. Less rosy perceptions about the local business climate come through. Although many Asian investors have been lured back by political reforms which welcome foreigners back into the country, they report that high costs of utilities and transportation and persistent economic policy constraints (e.g., currency overvaluation, high interest rates, and tariffs on inputs) make it difficult for them to compete, even on import-substitution basis. This may explain why initial investor interest is greater than actual investment by foreigners. Only 40 percent of planned investments are actually implemented in Uganda, suggesting that the gap between official pro-private sector strategy and its realization may still be rather wide.

In 1980 Kenya outranked Mauritius in both savings and investment. Since then, deterioration of both economic and political policy have created negative incentives for investment. Anti-foreigner sentiment is still strong, and political issues are heavily charged with overt ethnic biases. Restoring investor confidence in Kenya's political and economic institutions will require a commitment to reducing or eliminating inappropriate government spending, restoring decaying infrastructure, and addressing the equally onerous burdens of variously excessive and absent business regulation.

FDI has a strong stimulus effect on domestic investment, and on economic growth. Globalization has meant that capital now flows quickly to countries which present interesting investment opportunities – and shuns those whose institutional "fitness" is less conducive to private sector expansion. Governments need to be savvy about the incentives they offer to potential foreign investors, and recognize that these will be ineffective if not combined with a sound economic environment. An under-explored variable by most of the other research surveyed in this paper is the insight that negative social capital (e.g., anti-foreigner prejudices, ethnic fragmentation) can be a strong disincentive to investment and thus economic growth.

VI. Emerging Conclusions

What does this body of work tell us about African firms and productivity, comparative advantage, and competitiveness, and the ability of the private sector to contribute to restarting growth in Africa? Organized according to the points of the Porter competitiveness diamond, a number of themes emerge:

A. With respect to factor conditions

- 1. *Managerial workforce development challenges*. Labor skill shortages are widespread in Africa. While unskilled labor training requirements exist, workforce development challenges are more pressing with respect to the training of technical and managerial labor.
- 2. *Limited local savings and investment.* Because of the persistent riskiness of local business environments, savings in Africa are low and local investment in long-term productivity enhancing strategies to grow manufacturing businesses is limited.
- 3. *Underdeveloped financial sectors*. Financial sectors in banking and non-banking areas are underdeveloped and fail to provide competitive financial intermediation services to their industrial sector clients.
- 4. *Limited foreign investment*. The lack of an enabling environment (economic incentives, rule of law, sociopolitical stability, infrastructural development, etc.) conducive to business expansion in many African countries limits the flows of foreign investment into Africa.

B. With respect to local demand conditions

- 5. *Limited manufacturing/exports and narrow scope of domestic market.* Manufacturing sectors are still rather limited parts of the economies of most of the countries examined. Exports are also quite limited, especially for non-traditional goods and services. Moreover, the domestic market for manufactures is extremely small or non-existent.
- 6. *Regional market opportunities*. Some African manufacturers who export do so as "regional import-substituters." While this may expand demand viewed by manufacturers, it does not encourage increased competitiveness in the sense that quality and service expectations are still not comparable to those highly demanding levels found in world markets.

C. With respect to related and supporting industries

- 7. *Lack of availability of local input and service providers.* In most of the countries examined, world quality inputs for manufacture of export goods and technical assistance for training, strategic development, and investment must be imported. Local sources of supply are either unavailable or are heavily taxed.
- 8. *Poor state of infrastructure*. Lack, unreliability, and/or high costs of electricity, transport networks, and telecommunications are strong deterrents to investment, productivity increases, and competitiveness.

D. With respect to firm strategy, structure, and rivalry

- 9. *Barriers to business expansion*. The business environment is still extremely challenging and risky in many African countries. Problems identified include red tape and corruption, infrastructure unavailability or unreliability, and inefficient circulation of goods across national boundaries, both within regions and with respect to world markets, due to inefficient customs regimes, illegal informal trade barriers, and transportation monopolies.
- 10. *Harassment of foreigners and ethnic minorities still acute in some countries.* Such negative social capital is destructive, and undercuts interest by such social groups in investing locally, sharing their international market connections, etc.
- 11. *Isolation from global business practices.* Many African firms are isolated from international business practices. This affects everything from accounting standards to management of export client relations, relations with their workforces, product identification and design, expectations regarding pre-shipment financing, etc. and results in African firms being on extremely unequal footing relative to their Asian and Latin American competitors.
- 12. *Lack of intra-cluster collaboration*. The limited size of most domestic markets creates the perception among African entrepreneurs of limited opportunities. This in turn leads to an extreme reluctance to develop collaborative partnerships across firms within the same clusters. Examples of intra-cluster collaborative actions which are not well developed in most African economies because of jealousies and suspicions include coordination of lobbying efforts vis-à-vis the state or negotiation efforts vis-à-vis world organizations, aggregation of custom input orders by manufacturers from domestic suppliers, agreement to common grades and standards, pooling of research and development needs, creating professional associations, and collective marketing campaigns.

E. With respect to role of government

13. *Persistent policy constraints*. Although macroeconomic stabilization and trade liberalization have been important parts of country programs over the last ten or fifteen years, anti-export biases persist in the economic incentives regimes of most of the countries examined. The threat of policy backsliding in many key areas is also real, especially as countries are encouraged to liberalize their political systems and candidates compete for favor among various interest groups.

F. With respect to chance

- 14. *Higher risk of shocks in Africa*. The composite ICRG risk rating listed in the World Bank's *World Development Report 2000/2001* indicates that sub-Saharan Africa has the lowest index of any low and middle income region. Risks include political instability, civil unrest, and war. They include man-made and natural disasters ranging from AIDS to drought and floods and sudden shocks to regional labor markets such as occurs when guest workers are suddenly expelled from Nigeria or Côte d'Ivoire and forced back into their original homelands.
- 15. *Social institutions to mitigate risk*. Institutions to help families manage risks of market uncertainty, health, climate, old age, etc. are inadequate. This not only increases the precariousness of life for the region's most vulnerable and poor, it also reduces the propensity to take risk by entrepreneurs, and probably lowers investment in long-term productive activities.

VII. Agenda for Future Research

This closer look at approaches used in the works undertaken under the auspices of USAID and the EAGER cooperative agreement suggests that future work on manufacturing sector competitiveness needs to go beyond cost analyses. The data are specious: the primary data are difficult to collect for specific products and difficult to interpret if gathered at the aggregate level of "the firm." Moreover, finding detailed cost data for relevant international references is also a challenge. From a broader perspective, as competitiveness becomes decreasingly a function of cost and increasingly a function of qualitative management and policy variables, the emphasis on cost analyses is less important.

Instead, future work needs to consider qualitative aspects of product development and industry management, in the context of the specific competitiveness pressures facing global markets in particular industries. In order to truly understand the constraints to productivity-enhancing investments we also need to pay attention to the political and social aspects of policy making and doing business in Africa. It is from micro case studies, grounded in an understanding of the competitiveness factors driving specific industries around the world, that we gain a better appreciation for what is and is not working on the ground in Africa.

We see firms struggling to survive in risky environments that raise the costs of doing business. Even entrepreneurs who have learned their craft in modern, competitive markets abroad return to Africa and find it almost impossible to continue manufacturing for international markets, given the cumulative effect of institutional constraints and uncertain business environments. However, the vast majority of entrepreneurs do *not* yet have opportunities to learn and expand their business skills while rubbing shoulders with international trainers, customers, suppliers, competitors, and business service providers.

Is labor-intensive, export-oriented manufacturing, based on low wage unskilled labor in Africa a viable strategy for restarting growth in Africa? Many argue that the learning involved with such low-end penetration of global market supply is a useful step in accumulating skills about manufacturing and exporting. They point to historical experience of other developing regions of the world who successfully pursued this strategy.

Yet the demand for competitive workforces has never been higher, as developing countries around the world compete for access to foreign investment resources and commercial contracts to connect them to global markets. Even the manufacture of standardized products which once served as the core of such labor-intensive export strategies now requires increasingly sophisticated workforce skills in the areas of management, product development, technical oversight, trade, and finance. Rising wages in the Malaysia shifted the production of basic labor-intensive manufactures to the Philippines... rising wages in the Philippines now shift that same bottom-end manufacturing to Vietnam... but the Vietnamese recognize that they profit little as long as access to international input suppliers, designers, and retailers is dominated by foreign brokers and their contribution to the global production network remains concentrated at the labor assembly point in the chain.

The follow-on research agenda is clear. We need to undertake more in-depth survey work within industries and firms to understand how entrepreneurs in Africa cope with the various constraints they face. Such survey work needs to be done using a systems approach to the analysis of competitiveness, in order to understand the direct and indirect factors affecting the firm, the supply chain, the industry, and the meso- and macro-economies within which the firm operates. We need to identify the best management practices among firms with respect to such things as:

- hiring and firing of workers,
- training workers at all levels of the firm,
- establishing output incentives,
- innovating new processes to improve efficiency,
- accessing information about and use of new technologies,
- increasing firm capacity use rates,
- developing new telecommunications and transportation strategies,
- managing global supply networks,
- marketing creatively,
- developing new products at higher price points,
- negotiating trade and business agreements,
- servicing overseas clients,
- building professional coalitions domestically,
- reaching out to professional networks internationally, and

• lobbying policy makers.

And we need to interpret what we see in the context of the social and cultural pressures faced by African business men and women caught in the middle between tradition and globalization as they try to improve the labor productivity of their workers and grow their businesses.

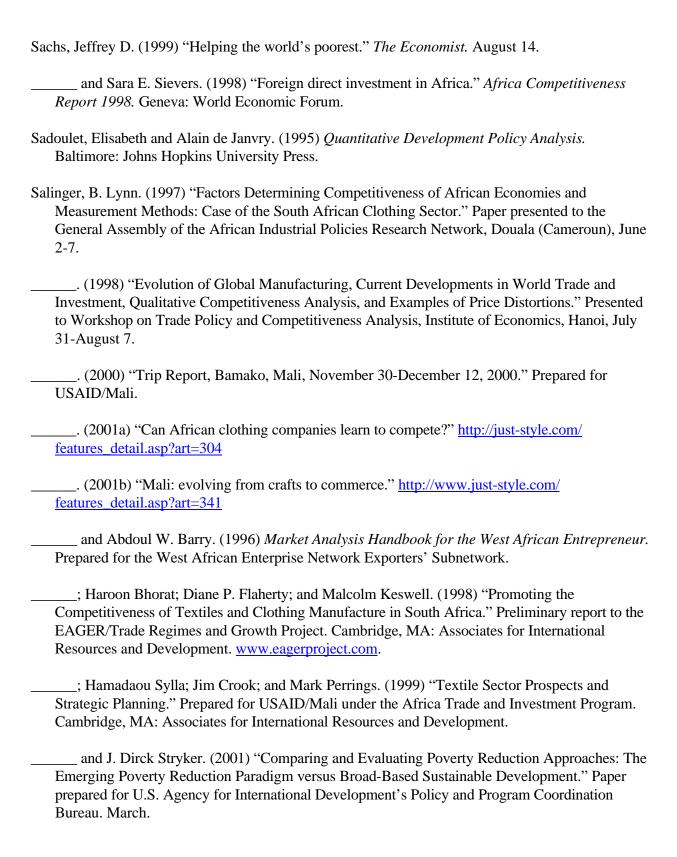
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